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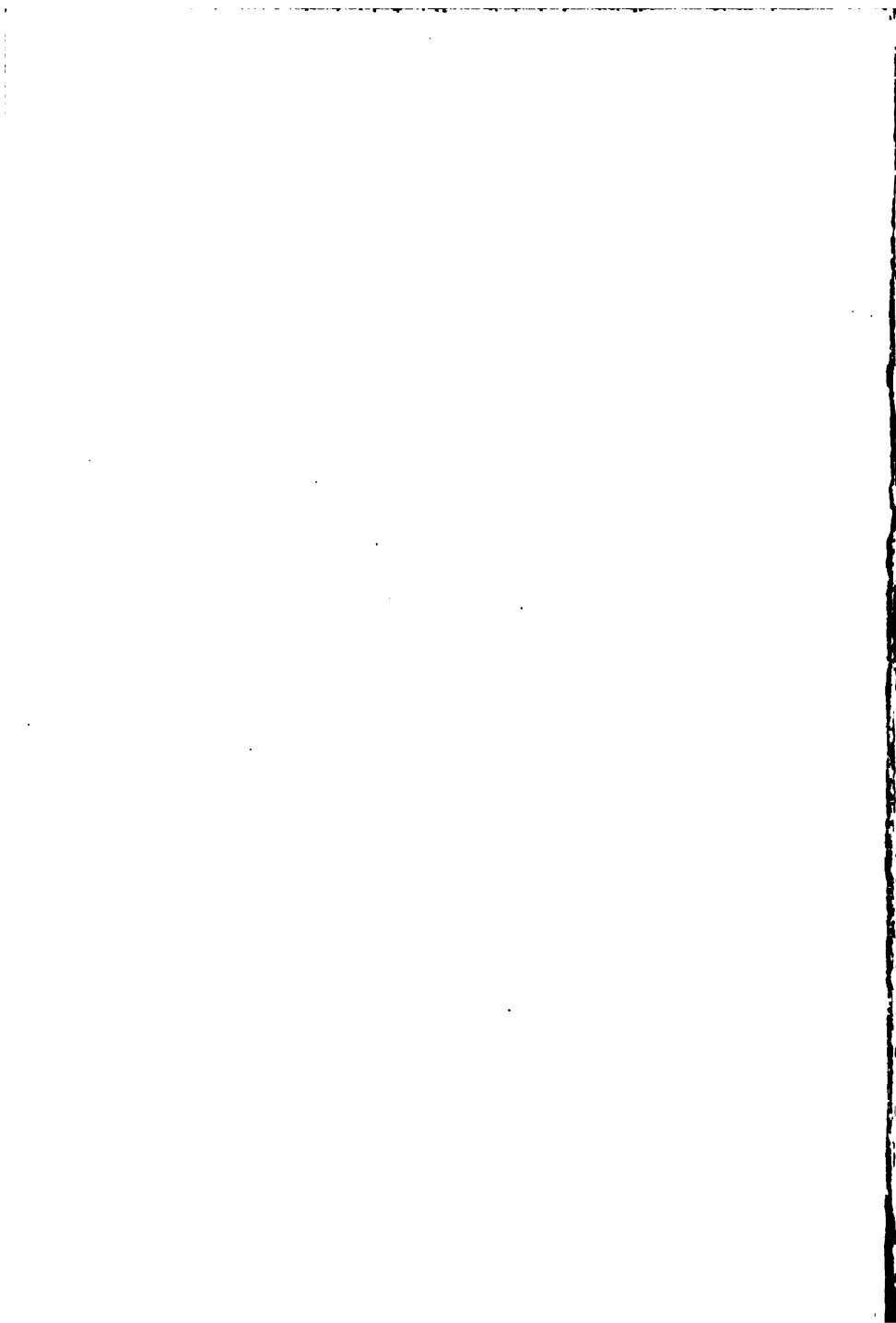
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THE INFINITE PRESENCE



THE INFINITE PRESENCE

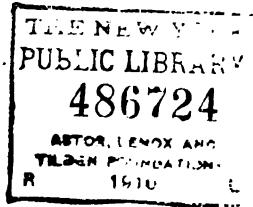
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GEORGE M. GOULD, M.D.



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THE INFINITE PRESENCE

CHAPTER I

THE INFINITE PRESENCE¹

KANT said that two things were sublime: the starry heavens above, and the moral law within. Upon reflection, the stars suggest to "the natural man" but a crude, vague, and far from infinite idea of infinity, and many experts have "explained" the moral law as a utilitarian and evolutionary product. The philosopher's reverence serves, nevertheless, to divide the infinities into two classes, like all other phenomena, those without and those within, objective and subjective, or macrocosmic and microcosmic. It will be found that a third class must be added which will comprise a number that belong to

¹ The Atlantic Monthly, December, 1904.

neither world exclusively, but are the joint product of both. In a rigid Berkeleian or Hegelian analysis all would be subjective; in a looser one all equally more or less composite; and especially if one accepts language at its par value, and common sense at its own rating.

The eye of the mind that does not infer sees the starry firmament simply as light-points in a dark blue setting. Distant these points are indeed, but any very great distance is a teaching of hearsay, or inference, and only the astronomer, or one he has taught, has more than a vague and extremely finite conception of their immeasurable distance. The shepherds thought the guiding-star of Bethlehem moved and stood over the manger in which lay the wonderful child. They had no hint of the amazing distance, even of the nearest star, and possibly even Kant's thought of it was vague as compared with that we now hold. How many Americans and Europeans to-day suppose that a meteor is truly a "falling star"? That a star could not move, or point out a locality upon the earth, or the earth itself, is

not to be understood by the shepherd mind. If a newspaper reader has seen a long string of figures expressing a guess at the distances of stars, they of course express to him no idea more definite than if the numbers were one tenth or ten times as many. It becomes at once the something non-finite, as do all such things not cognizable by his assumed finiteness. The infinite is thus to most a mere negative, whatever its nature, an impatient naming of the unexplored and unnamable. If one attempts to bring to the ordinary mind a somewhat more adequate thought or picture of the infinite, trying to replace its negative by a positive idea, he is met by a smile of incredulity or of shrinking wonder, confessing renunciation and the inability to follow. Should one bravely persist and endeavor to show that the so-called "light" of the stars exists only, and is created, in a tiny, wholly dark space six inches or more behind his own eye, there is a risk of a not flattering answer. Add that not only light, but color also, sound, hardness, heat, cold, odors, etc.,—all the "things" our

senses tell us of, are sensations, mind creations, unknown products of unknown things by unknown methods and mechanisms. That would be unkind to him, and worse than useless.

Our language demonstrates the purely negative and renouncing action of mind as regards infinity. We have no word for expressing it positively. "Endless," "immeasurable," "infinite," etc., give no desired positiveness, and even the quasi-affirmation in the word "eternal" means only that which endures for an age, the latter meaning originally a lifetime. The seeming positive notation of the word "omnipotence" is no less essentially negative, because men have never thought of it as anything but subjective,—an attribute of God. But God Himself, the idea of Him held by the careless believer, is only that of an unknown, unknowable, non-finite, into which vast unknown are indiscriminately flung all tormenting mysteries. He thus becomes philosophically the reserve of unexplainables awaiting our leisure and ability. One by one we must take out and at least seek to solve our

problems. God must be made cognizable. We can hardly be as perfect as He, which is commanded, if we cannot even know and understand His characteristics; surely not, if we do not even attempt the least of such knowing and understanding.

It is not an advanced psychology that demonstrates the mental creation of finite sensations, and it is also as early shown that the larger makings of infinities are from the materials furnished by the mind rather than from the outside world. It is a truism that seeing is slowly learned, and that, whatever hints reflected ether-waves bring the eye, vision—accurate, useful vision—is a product of the brain and mind. In the same way, evidently, one can readily determine that the thing actually seen, the blue sky with its dots of light, beyond the reach of his flung pebble, does not even suggest infinite space or universe to the shepherd. Nor does the objective give any positive idea of any kind concerning the non-finite. An unknown something out there in some incomprehensible way started some vibrations which somehow or other were trans-

formed, and at last got to the proper brain cells. From numberless results of the kind the mind made inferences and reasoned of the outside sources of the sensations. One need not proceed to the Berkeleian extreme of denying all objective reality in order to take from that outside cause such vast quantities of attributes as must be done to be just to the spirit co-partner. Even the newest physics resulting from radium discoveries may, according to Professor Lodge, leave some abiding nucleus of materiality at the center of the many-guised, cunningly concealed, ionic molecule. If at last that is dissipated into ions, empty centers of vibrational forces, the vibrations at least exist, and with them all that is essentially objective. The atomic theory is by no means destroyed with the destruction of all "atoms."

In the same way there remains at least the assured residue of objective infinities, but when the mind gets her proper share of its endowments, they are not so rich as supposed. Infinity dwells less without than within, and mental coöperation is

required for the creation of even the crudest objective infinity. Summarize all the racial sense-impressions, condense a hundred kinds to the quintessential instincts, still they would be finite in origin and number. The multiplication of finitenesses by any finite number leaves the product still as far from infinite as the first unit. Were the mind a product of materiality and finite experiences, the word "infinite," even with the negative connotation, would not have been formed. That it has positive significance is indubitable, hence the iron law of causality demands that it come from no finite source without. We do, in fact, endow that without with our own self-grown infinities. The analyses of reality, the progress of psychology, all show that our new science is largely a transplanting or taking back to our own minds the rich qualities with which we had too generously endowed matter. In our generosity we lent the old actor our own wardrobe of the spirit. He thereby acted the cosmic role assigned to him with better grace and seemliness, but he was in honor bound to

return the gold-embroidered cloak and gem-decked crown. He could not wear them in the street. Nor did he need them there, for in the highways of materiality is no cold or warmth, nakedness or garment, beauty or grace. It is only personality and sensation that need, or know, or can own these things. When the intellectual part of personality grows beyond the charm of played amusements, it smiles in pity upon the child's need and the time when it found so much pleasure in imagining into the sticks and wires of its marionettes (world, space, and time) its own greater, more infinite, personal comedies and tragedies.

And yet the wealth and power which materiality pays back bring their own responsibilities. Unused gold without interest is of no more value than so much iron, and to yield interest or profit, work must be done. By no unimproved or unearned endowment do we come to the grasp and enjoyment even of metaphysical things. The possibility lies in our nature, it is true, and in the nature of mind; but it does not spontaneously exercise itself.

We gain the heaven, not only of feeling and duty, but of intellect and imagination, by hardened muscles and tireless climbing. Metaphysical athletics is the most strenuous of all, but these scalers of the Alps of the Spirit have seen views unknown to others, and so superb, so indescribable, that the rare light in their eyes is almost the sole hint of the supernatural glory. The philosophies and religions, the poesies, literatures, and sciences, of the few climbers, are only fainter suggestions; and yet these have made the civilization which we find so miraculous. If humanity itself should attempt the great ascent, whence the stars are seen, not as discrete light-spots sown in the overhead blue, but as the beacon-fires of the soul calling Life to victory over the world!

The two infinities of Kant did not chill or hurt him, but his fearlessness is shared by few. Only for a short instant, at best, will most persons consent to look open-eyed at any clear image of fate or of infinity. Scarcely a friend of mine will look steadily at the clear midnight sky for a minute in silence. The freezing of the

heart that follows, the appalling shudder at the dread contemplation of infinity, which may be called cosmic horror, is more than can be endured. If those stars are absolutely and positively infinite, then there is no up or down, and they knew no beginning, will have no ending. With any such staring Gorgon of fatalism the surcharged attention is shaken, and the chemistry of common life seizes upon the liquid crystals with avid hunger.

But why may not this cosmic horror be turned to cosmic pleasure? It is at best not bravery or athletic prowess, and at worst it is a psychic want of equilibrium, a morbid metaphysics. When one has health, strength, and expertness to do a thing there is pleasure in doing it. In a word, the horror is from disuse of the innate power, and the sublimest pleasure may be found in excursions into the infinite. For not the least of the astronomer's delights springs from the grand distances and incommensurables with which he deals, the limitlessness of the pictures nightly spread before him. And is not the historian's similar pleasure in the sweep

of eye from age to age and from nation to nation, correlating to unity millions of individualities and events hidden from those who dwell in valleys and in singlenesses? In his analyses and syntheses the philosopher learns of another kind of grave charm, whereby the apparent disorder and fortuity of the world are systematized and coördinated into order and unity by some fair and far harmonizing principle. Such, in truth, are athletes; but their endowment and ability differ in no way from that of the shepherd following his star.

However modern and civilized the shepherd may be, should one rally him to an attack upon the infinite (God's infinities having been first set aside), he would answer that there are at best but two infinities: space and time. And he would see but one childish method—the stretching of the imagination. With perfect plausibility may not one contend that there are as many ways of “feeling after God,” as many routes of excursion into infinity, as there are personalities? Every one differs from all others, even from his brother, in some quality, aptitude, or

ability. The poorest soul has at least one window opening upon the beyond-the-limited. Most are richer in windows than they know. And richer in roads, too, for these lead out and subdivide, the last being but well-blazed trails, perhaps,—and follow them at your peril and pleasure!—conducting to great outlooking peaks. The window-gazers,—well, they can at least see their fellows yonder on the summit. But the infinite is not to be observed alone; it is not only observation, it is action as well.

Even the infinite of space may be sought by different routes and methods. Many are common,—by images of trains of cars en route for the moon, the sun, or the nearest star; by written figures giving the lowest comprehensible unit and its cumulated multiplications to a tottering incomprehensibility; by light-years;¹ by thought-spannings of standards derived from time-exposures of plates in photographing nebulas; by spectrum analyses of stars approaching or receding. Are

¹ The distance traveled by light in one year, at the rate of 186,500 miles per second.

such helps not often great hindrances? More resolute imaginations find them so. One may readapt an old likeness, devised before spectrum analysis (and curiously fore-feeling it), and imagine an eye poised upon a beam of light shot into infinite space from the satellite of a planet of some sun of a great solar system. If the eye travels slower than the rays that left after it, the unrolling process seems hastened beyond the actual; if it travels at the same rate of speed as all the other rays, then the moon and the system are seen as if stationary; but if it travels faster than the light that left before it, then there is to it an inversion of the process, and the satellite will be seen to draw back into its planet, this return to its sun, and finally the sun fade to the primitive invisible nebula.

By such fancies the mind may conquer its own weakness; but it must not be forgotten that materiality not only does not suggest, but that it even disallows them. Better methods are without images, by sheer intellectual muscle, generally with helpful suggestion of materiality, but not

by mirroring alone, and always with vitalizing feeling. One arrives sometimes by means of straight contemplation from mountain-tops, or even by gazing, by day and upon one's back, at the cloud-flecked and apertured zenith. At night a help is got by piercing beyond the easily visible stars to fainter and for long invisible deeper-lying ones,—and then the stretch of endless blue depths still below; the dizzying sight through a telescope of the jagged crater-tops of the moon jutting against the cold deep. Many such experiences widen and vivify thought, and leave enduring memories, psychic recuperating stations against more resolute mounting. It should not be forgotten that if there is a really and positively infinite number of stars, then at every conceivable point of the firmament there is located a star. Hence, if light were stronger or eyes more sensitive, there would be no discrete light-spots and star-points, but only a sheen of slightly variant intensity everywhere. A qualification of this image is required by the fact that about all stars are, probably, circling black planetary bodies,

which, rhythmically intercepting and revealing the starlight, would cause the diffused glitter or sheen of the sky to quiver with an intense stippling.

Finally, to grasp within the mental holding an adequate idea of the infinity of the spatial universe, recourse must be had to the scientifically educated imagination. Stretch the images and plays of fancy as one will, multiply conceivables with all the expertness of the best metaphysical prestidigitator, and yet if a limit is assigned beyond which stars and matter do not extend, then one inevitable consequence results; if finite, it must somewhere have a center of attraction. To that center, in an infinite time past, must have drawn the entire matter of the universe into one huge central sun. If planetization must follow, then the central sun must still be large enough to dominate all satellites as revolving servants. There is not only no proof, there is perfect disproof that such a central body exists, and that there is any such revolutionary order of the visible stars. Hence the matter and the suns of the universe extend, positively and limitlessly,

and eternally endure. Touch the logic with emotion, and one has realized the infinite of space.

There is a comforting corollary to this, one that reestablishes the stability that seemed to be slipping, and which tended to arouse the old cosmic horror. Our own solar-system home cannot swing beyond certain gravitational limits—cannot be “lost”—because it is held within infallible topographic bounds by the pull of the infinity of matter upon every side. The nearer it approaches any perihelion, the more the opposed infinite calls its return.

One may play with the thought (rather, the words) of infinite vacuity or emptiness, pure space; but the imagination balks; and the inevitable extension of the ether into all unoccupied space renders the thought resultless and useless. Moreover, the idea of motion or velocity of a discrete point or world in otherwise unoccupied and limitless space is impossible and self-contradictory. There can be no up or down or direction of such a body. Even in a sun-filled infinity there is no direction in any final sense. Lastly, that final and all-dom-

inating fatalism of the objective world, gravitation, precludes any limit to that world.

The mystery and the infinity of matter seem now fast disappearing into ideas of force. But one may rest secure that all the essentials of an objective world will remain. There is to be no utter deliquescence of externals into subjectivities. Neither physics nor metaphysics can kill the other in the duel of eternity. Periodic vibrations and rhythms become no less objective or real by the death of all the atoms, and the essential of materiality remains, possibly even more stable and unchangeable, with these clotted swirls of ions and ethers, than with the crude lumps called atoms.

And, with all material resolutions and Protean disguises, there remains gravitation, that most unexceptional, inexplicable, and primal of all the fatalisms of the material universe. Only spirit is freed from its dominance, and even that only when it is freed from its bound body. In the alembic of thought the old idea of the material of the universe may, and probably

will, disappear; but only to rise again as motion, which will endure as essentially objective. There is an ill-defined borderline between spirit and body somewhere along the track marked "sensation," in which motion seems both subjective and objective; but when one actually gets well across it, supposed mentality on the one side is clearly only motility, and on the other it is as surely only immotile mind. On the outside, as we look at it, the entire product passing as the old conception of "matter" is perfectly represented by the word "gravitation." Hence, transfixed by our thought, it becomes the consummate and convincing exhibit of omnipotence, or the infinite of power. How absolutely it fuses the mysteries and controls the facts of matter is seen in any attempt to think ungravitation. The result would be the homogeneity and motionlessness of the universe reduced to uniform nebulosity. One atom could not vary in distance or size from any other, and none could be in motion. Thus, gravitation is the sole source of quality and motion. Antigravitation, the unlimited sway of centrifugalism,

would be followed by a more striking extension of the component matter of the universe into infinite space, and this would be simply an eternal thinning process, wherein the increasing nebularization would never quite become an impossible nothing. On its positive side gravitation thus becomes the best and most easily grasped demonstration of the infinite of power. And as no human intelligence has scarcely caught sight of even a hint of an explanation of this strange force, it stands before us as truly supernatural, and all the more amazing to the trained mind, because unlike most thought of the supernatural, it is uniform and exceptionless. No atom ever escaped its control. It was the first born of all fates and fatalisms. The condition of true philosophy and mental power is to realize and explain that which is the most common. The poor mind concerns itself least with that to which it is most habited. To the other the oldest and most invariable stimulates the most curious inquiry. If gravitation is ever explained, the oldest source of awe and the greatest sense of mystery will pass out of human

life, and both peasant and philosopher will have lost the splendid example of sublime and omnipotent power. The charm of its mystery will, at least, have been lost, and the god of matter, gorgon to the at first startled observer, restful to the resolved mind, will have been dethroned by a mathematical and mechanical formula. Other methods, of course, remain of reaching toward the conception of omnipotence, but none is comparable to this. Herbert Spencer has given us the look of it in his *First Principles*, when he sketches the congelation of the solar system out of the supposed primal nebula. In measureless years he says the icicles are revaporized, and thus the cold eternal heart of fate proceeds in rhythmic systole and diastole, each beat a universe repeated every billion years. One may forget that this is a corollary, a method of action, of the wonder of gravitation.

The infinity of time is sooner dispensed with or mastered, because time is merely the measure of vibrational motion. One thus comes near reducing it to an attribute of mind, a registering of revolutions, a

method of mnemonics. Quicker or slower become very relative gaugings, and to the eye on the ray of light, meaningless and self-contradictory. In a static, motionless, or non-revolving universe, there could be no time, and plainly none in vacuous space. It therefore becomes the name for periodicity of motion, begot of physical recurrence and of mentality, non-existent without both parents. How necessary is the subjective parent is illustrated by the De Quincey opium dream. If the dream would always result from the hashish as it did in that instance, if the test were not dangerous, if it were not morbid, and if the tester were surely strong enough, a single daring trial would be educative. But pathologists and experimenters do not advise it, and it is unnecessary because the results are to be secured by normal methods and are more satisfying. The normal dream of sleep furnishes an abundance of data, too frequently undervalued, as we know. Freed from the bindings of the body, the dream-personality plays recklessly with the stupidities of the waking sense of space and time. Our daytime

efforts to condense or stretch time out can never equal that dainty ease. We live so fast or so slow then, we focus long stretches to an instant, or find the dragging moment never passes, or the trivial deed is never done. We stride from mountain-top to mountain-top with miraculous ease and fearlessness, slide down clouds or along the edges of the world with such fine unconsciousness of impossibilities! The subjectivity of time is illustrated, too, by sleep itself, especially if dreamless. Where has time been since, eight hours ago, we stopped thinking? The sleep of anesthesia is no more, nor less, striking. There are also pathologic and traumatic lapses of time in which, with the loss of memory, there is also a loss of personality, the finding of another self, entirely alien, with as sudden a resumption of the old self after weeks or months. Under such circumstances the puzzle becomes, not what is time, and where, but what is the ego itself? Indeed, how large a portion of what we call individuality, in a last analysis, disappears in the mystery of memory?

In our best and most revelatory experi-

ences with the infinite, there is a subtile fusion of objective and subjective, each illuminating the other, and each crying "Brother!" The influence of rare combinations of mental sensitiveness and rarer circumstances with almost unique composites of fact, may, once or twice in life, bring an experience of incomparable stimulation and rebirth. Such moments come at some time to most of us. Once in our life a sunset may occur, a perfect silence, a sickness or a flower, a vision from a still mountain-top, a billow-breaking rock and a far, fine, sunshot horizon line, a divine music-moment, a terrible line of poetry, a bird singing in storm and shine, some tale of heroism with its swift reflex on our own failure or success,—how many are the incidents that reveal the world—and ourselves—to ourselves. Many infinities may thus meet and blossom in the soul to a marvelous flower. Here is one: a becalmed boat, silent, upon a silent and unrippled sea; a soft veil of enwrapping fog blotting out all things of sky, ocean, or horizon. By some lightening of the fog, suddenly there gleamed out of the east the

full moon, a huge globe of silver glory. With a glance to the other side there was seen the setting sun glaring through the mist with crimson intensity. How infinitesimal the bit of human life poised in nothingness between those two awful Eyes of Eternity!

Moreover, not only infinitely small, but infinitely large and extended! As the material universe is limitless so must Life extend beyond finiteness. We know that all stars and planets have essentially the same constitution and nature as our own solar system; sometime during evolution, therefore, one or more planets in each system will become the home of Life. If but one in a million, Life which is intelligence or spirit, is still absolutely limitless.

The best and richest of our infinities are of the spirit's own creating. One said of a certain rhapsodist that his gravitation was upward. The unstruggling ease of the bird's flight seems natural to us, but in truth our thought is not subject to gravitation; it goes up or down with equal willingness. There is even no direction in its spaceless universe. Kant felt the moral

law within as sublime, as convincing a demonstration as the starry firmament. Matter, space, time, and power, these words express the whole of externality. The rest is spirit-land. And how rich it is, how much richer than that poor out-thereness! If the real and greater infinite is self, why not navigate that universe? We may do so as successfully, more so, one would surmise, than by any lift or push or reflex of materiality, any thrust through space or time. How few have thought of discovering themselves! It seems a strange perversion that moved humanity to set out upon its world voyage of discovery. The journey of knowledge began in quest of the farthest and least useful wealth of good. Leaving the home Lares and Penates the voyager sailed to discover stars; the world of astronomy and geography he would first know. When he found his own earth, its nature, geology, next moved his curiosity; then its animals. Finally, coming ever nearer, he discovered his own body, and busied himself for long with its least important bones and muscles. At last he saw the mirrored picture of his own face, and

that of his brother. The acquaintance should ripen into amity, for all his knowledges and acquirements are epitomized and reclassified, revived in the ego, to study which he now returns to the home. The household gods are found in a sad state of neglect, and in their place is the new altar of Science, with the motto, *Spiritus mortuus est*. The Father, he finds, has also died. In his voyaging he had heard that spirit does not die. The priest at the altar of Science assures him that all force may be transmuted, but not extinguished. Is not mind, then, also a force? Is it not as indubitable that the "mental" of humanity is being increasingly worked into the very warp and woof of the material world? Ah, but the weaver, man, at "the roaring loom of time?" His spirit cannot be-localizable, as his body was, and the old cosmic horror of infinity breaks or threatens once more. The tragedy of broken faith recurs forever new, until one learns that spirit is not here nor there, and is as real, though not bound by the realities of space, time, matter, or gravitation. All previous studies of the out-there were preliminary and prepara-

tory muscular play before the trust of the spirit wings in an air finer than the luminiferous ether.

How is it with the others, his brother voyagers? The majority have remained "common sailors," the tools of a superior directive will. They have felt no need, nor essayed any power, of knowing the infinite. In their natural bodies (these sad feeders and workers, not for themselves, but for others) psychism may sometimes nest. Promises and possibilities may from the first be suggested, the beginnings of the tool-making faculty of true mentality; but they are themselves the pathetic tools of the struggle for existence, the methods of making secure the incarnation process. Theirs not to reason why, theirs but to do and die. The second great class take their infinities on faith, trusting to the reports of others as to the existence of such things—the routine accepters of unstudied creeds. Allied to these are those who follow little less blindly the school of prepared philosophic or historical thought into which their minds drop with the least friction and hurt.

But the number of the returning Captains of Thought, of the original discoverers of the infinite, constantly increases, and they come to greet and to know one another, from afar in either space or time.

For they are themselves normally spaceless and timeless, and hence true citizens of a genuine Fourth Dimension. And they are one, a united people. Each, by predilection, may have, indeed must have, a special method of realizing the infinite, but all have the same ultimate ideal. They are students, lovers, brothers of the Infinite Presence. The universality of matter, the infinity of filled space, the rhythms of time and motion, the omnipotence of gravitation, all have prepared the student to see, to feel, and to know the Infinite Presence.

The definings of the name "God," even by the most intelligent of its users, and even by a sect, or by one person, make it impossible to use the word longer so that it shall have any definite significance. Close analysis of a single attribute soon lands us in contradictions, if not absurdities. Mankind has so persistently accustomed itself to make God the indiscriminate

holder of its indiscriminations that the term has become a mere receptacle for humanity's unsolved problems, a sort of universal question-box of antitheses and puzzles. Instead of adding to the conglomerate, it is our duty to withdraw the slips and answer the questions, if possible. There is no valid reason against, and every reason in favor of, the scientific study of God, a rational theology. If there is anything corresponding in the least to the reality designated by the name, let us learn carefully and accurately what it is. Even the self-supposed atheists and materialists are, to a degree, theists and believers in spirit. It is incumbent on them to determine how far they must go and how little they can believe. The jumble of inconsistencies and of moral and intellectual cowardices that the weak have made of God by no means excuses or warrants wholesale denial and impatient cynicism. When the tragi-comedian Heine would relieve his own suffering by a sad laugh at the world, he said, "Oh, He'll forgive me, it's His business." The amazing extent to which sin has dictated the conception of God is a

terrible revelation of how little men have lived up to their light. "Jesus died and paid it all, all the debt I owe,"—whole theologies of such horrors do not lessen the truth that vicarious atonements are the commonest tragedies of our every-day life. "God is Love," "He is Goodness itself," sings the devout believer, and he believes as fervently, or did once, in the hell pictured by Adam de Ros and Dante. St. Francis, Calvin, the burners of the Albigenses, all used the same word for their divinity. "He is Beauty" to the artist; "but, first, Truth," cautions the scientist; and to the poet, the union of Truth, Goodness, Love, and Beauty. It grows plain that the old way made of Him the impossible alembic of all contradictions, a sorry makeshift of dialectic difficulty and ethical failure. The fundamental error of all the definers was that of making Him responsible for the inorganic universe, or cause of the material world. Ultimate origins, they did not see, are insoluble and unexplainable, and no help was to be got in our intellectual trials or practical woes by the absurd supposi-

tion of an uncaused omnipotent person as the cause of the physical universe. There is no proof or suggestion of proof that the inorganic universe came into being by any such help. With the modern study of life, however, came the recognition that, so far as its incarnations are concerned, it is a creation. We see its miracles, its millions of organisms created by means of effort, purpose, and ingenuity, every day; we see a common endeavor and approximated ideal in and behind all of them; a guiding purpose is evident, converging through all biologic history to a plain and clear, and not very "far off," "divine event." In a word, there is manifest in all living things the Infinite Presence. We endow it with no other infinity but this of presence, for to the derived user of the word "I," it must be forever present. In every other derived ego, it is as manifest, whether flower, tree, animal, bird, or man. All are plainly of supernatural origin, physical forces their utilized tools. No purely physical thing has an ego. It is utterly undesigned and purposeless. To this a consistent and earnest science is driven,

or softly comes, by the inevitability which Lord Kelvin, in his way, has recently admitted. How much or how little of the attributes formerly crowded upon "God" may be possessed by our "Biologos," none may say. None may with impunity transfer the old to him, or bring new. He is not to be unloaded upon. The old god is dead with the accumulated sorrows of the ages. The new one is not the resolver of our mysteries and forgiver of our sins. His own world difficulties are enough, and he demands of each of us to aid, not oppose Him.

And quietly grows the perception that, when as person and spirit we do thus feel and know it, we recognize it as like ourselves, as one with us, as the Father of us, we the Sons. He has no eyes and yet is looking at us, no ears and yet He hears us, no face and yet His smile greets us. He is not here nor there, and yet both here and there; not then nor now, but both, and continuously—this Divinity of Biology, Father of Life.

It remains for the modern cultivated mind and sensitive heart to fuse into liv-

ing personality the antitheses of religion and science, esthetics and morality. As the outcome of ages of specialized effort, such a synthesis is at last possible. The intellectual mirroring or coördinating faculty, viewed in the most superb of its philosophies or sciences or material civilizations, viewed in all of them combined, is, of course, but a part, a small part, of the living and feeling personality; it is but a part of life's being and work here. Religion also caught one of the most vital and primal of the truths of existence, the Fatherhood of life, and the childhood of the living; but it ignored the beautiful too much, the ethical—the objectively ethical—far more, and the intellectual was to it almost the same as the devilish. But few artists have ever learned that beauty is only the smile and the benediction of gladness over the true and the good, the loved and loving real, and can in no way precede or ignore the three fore-running gods of life, religion, reality, and morality. Neither dare ethics do the same as to its own three elder brothers. But nothing now hinders the modern child of the ages

from having the clear scientific grasp of the world of a Kelvin, and at the same time being as religious and as ethical as St. Thomas, as beauty-loving as Ruskin. For the Infinite Presence is instantly recognized as being the living synthesis of all these characteristics of which we as partial incarnations present only facets. Religion is but the yearning toward Him, and actualizing Him in our own life, history the record of the progress we and the biologic process are making in this ideal-realism. Civilization is the tool He places in our hands for use toward that end, morality the method of using the tool, beauty and happiness the proofs that it has been used wisely and unselfishly. We now know that materialistic science is not scientific, that exclusive morality is immoral, immoral esthetics not beautiful; and that a zealot's religion is most irreligious. Let us have done with partialism!

And how different the infinity of the Presence from the inorganic infinities! Purpose, intelligence, ideal, beauty,—these were the lendings of man to nature, so far as the lifeless infinities were con-

cerned; but every cell, organ, organism, history,—the whole biologic process,—is instinct with them. There is everywhere increasing success dominating always-present and partial failure, personality without individuality, an eternally new phasing of the Infinite Presence. Because it is a genuine incarnation, his indivisible life deputed in each cell and in each mind, with its allotted duty and work. But the reins are held in one hand. We are free only as deputies, not absolutely, and never without the daily accounting, the night's necessary repairing of sleep.

All history is revealed as experimentings and exercises in methods of gaining the consciousness of and unity with this single presence. Religions and religion first made the ideal clear, determined upon its actualization, and, despite a thousand failures, have always held the I-and-my-Father-are-one steadily before reluctantly obedient humanity. Each in his way, but none doubting, the religious leaders, the saints and the martyrs, heathen and Christian, forefelt, foreknew the unity that

would come even when their own errors should have helped to bring it. They may have cursed the science necessary to bring it about, and their curse helped the bringing. Materialism and science may have denied the religious brother, but each was necessary to the other. Speculative philosophy and dialectic were but a training of expertness. The systems fail, but systematization succeeds in their failures. The art that should unite truth and beauty may have been untrue and unbeautiful, but it kept the vision, cheered the worker, and died for the new art coming or to come. The best and most serviceable tool of the Infinite Presence is civilization, and of its uses we are as yet only dreaming the most childish dreams.

For the one characterizing and dominant fact of the biologic process is the steady and measurable increase of its control of physical and chemical force. With every new and successful organism,—amoeba, grass-blade, animal, man,—there is, by so much, a detachment of power from the inorganic, and an added gain of energy at the disposal of design

and purpose. The clear pointing is to a vitalization of matter, at least a vital control of it and of its forces, a spiritualization of the mechanical. The inorganic, the infinities of space, time, matter, and force, in and of themselves are inconsequent, meaningless, have utterly no *raison d'être*. In the hands of spirit they may be of service, and their existence justified. The God of biology, the Infinite Presence, is patiently, increasingly, gaining such control by means of civilization.

"The moral law within" merits the grandeur of its office as seen by Kant, in that it is simply and solely the command of the Infinite Presence that we, His sons, must become His heirs, helpers, and co-partners. That of old is the significance of all ethics; and of all religion, which is but duty vivified, obligation motivated by love and graced by beauty. Morality is our obedience to the call; happiness, of the world or of any one of us, the proof that we have obeyed, the benediction of His "Well done!"

The commingling of transcendent ingenuity with mistakes, of plain comedy, and

plainer tragedy, in the incarnation process, has its theoretical and its practical lessons. The Infinite Presence is made more familiar and lovable by them, despite the atheist's scorn. They give proof of the spontaneous and indestructible primitive belief that, though omnipresent, He is not entirely omniscient, and far indeed from omnipotent. They convince us that He is both Father and Elder Brother (surely He is, although of whence and how we have no thought), who wrests from Fate a new world of design and freedom, and to whom the ancient fatalisms are yielding progressive obedience. The unsuccesses in the copartnership are those who theoretically or practically deny the kinship, seeking selfish instead of corporate advantage. They are the sinners, the disobedients by choice. Then there are the failures, his mistakes or ours, the defective classes, the parasites, the pessimists, the suicides,—the egotists of all sorts and kinds. Are there too few obedient left? Ours the fault, at least in part, and certainly ours the misfortune. To us most clear of all comes His call to help!

CHAPTER II

THE BIOLOGIC BASIS OF ETHICS AND RELIGION¹

I WAS recently taking a walk along one of our principal streets in Philadelphia, puzzled as to what I might say to a company of good people whom I had been asked to meet. At one of the crossings there seemed to be a far greater number of persons gathered about the four corners than usual. Upon the first corner I found a man with a gaudily-painted star-figure, mounted upon an easel; by whirling the star and noting where the chosen ray should stop, personal destiny, or fortune, was foretold—all for five cents. This device was called "The Science of Solar Biology." Crossing the street, my attention was attracted by a man haranguing a dozen loafers from an old express-

¹ An address to the Men's Club of the Lenox Avenue Unitarian Church, New York City, November 9, 1898.

wagon. It was a street-corner orator electioneering for the boss who had directly or indirectly hired him. In three minutes the man uttered the word *destiny*, a dozen or more times, picturing the glorious future of our country if we should only absorb a sufficiently large number of conquered islands and peoples, and, in doing so, forget the evils of corrupt bossism and local government. On another corner a Salvation-Army squad was gathered, and the speaker was imploring and warning—again as to destiny. Upon the last corner was a gathering of monists, so satisfied with “identity in diversity” and “diversity in identity” that they cared nothing for solar biology, Matt Quay’s success, or Salvation itself. Surely the fates had conspired to give me a subject! Predestination could not have commanded more clearly. The destiny of the individual in this world, that of the Nation, that of humanity after death, and practical agnosticism—I could not complain that the subject was not comprehensive and grand enough! It was another case of “*de omni re scibili et quibusdam aliis.*”

Could I do any better with it than the "solar biologist," the election orator, the Salvation-Army lassie, or the beer-drinker? Nature, as I had seen, has kindly endowed most of us with an ineradicable belief in our own ability to solve the profoundest and most unanswerable problems; should I not be more modest than the destiny-solvers of the curbstone? But it was useless to fight genuine destiny. I tried to get your chairman to let me talk to you about trees, of which I know something, but he demanded biology, of which I know too little. My egotism conquered, and as every mind, high or low, erudite or boorish, must somehow or other make for itself, choose, modify, accept (even in rejecting), and finally conquer some kind of a philosophy of existence,—wholly different let it be also noted, from that of every other mind—it comes to this that we need not fear to tell another of our personal philosophies, because we are each pretty certain that the result of the thinking of that other is quite as distressing a product as our own.

And this philosophic pessimism appears

to me quite justifiable when we weigh the vast majority of ethical and philosophic systems of the past. Certainty, agreement, science, cannot be predicated of them. Is it far from the truth to say that the search for certainty by means of speculative philosophy, theology, and ethics, has in the past ended in absolute contradiction and nihilism? Every "Professor" has his system, but no two professors are in agreement, even the most general or distant. When doctors disagree who shall decide? Surely we children in philosophy are justified in doubting of both result and method when we behold the utter want of agreement of our teachers and elders. The child at the street-corner is dazed by the demands of the solar biologist, the political and the religious exhorters, and the monistic loafers.

And what is the cause of the chaotic disagreement? Why have systematic ethics and philosophy ended in fog and vacuity? The splendid thinking of the philosophers of erudition and the stupid thinking of the philosophers of the street-corners have both resulted in utter confusion and

subjectivism; and I believe, for precisely the same reason. Hegel is quite as guilty as the Salvation Army drummer; each has clutched out of the air a lot of premises or prejudices, it matters not which, spun together a lot of syllogisms and conclusions—logically or not, matters not—regardless, utterly oblivious, of the facts. Each alike has been busied and delighted with the whirr of the word-mechanism, indifferent and scornful of the truth that words and the ideas behind them must be simply pointers to and indicators of facts. The fundamental sin of both has been deduction. The stupendous tragedy and resultlessness of the world's systematic thinking and unsystematic ethics should make us forevermore abjure the method. The agreement of two minds as to one crude objective fact will result in more truth and progress than all the deduction and subjectivism from Plato to Neo-Hegelianism. Scornful of the scorn of idealists and word-jugglers, let us henceforth set ourselves to observe facts and draw rigid inferences from them. Berkeley is dead, and buried; Darwin is dead, and liv-

ing. Though half of Darwin's conclusions be ultimately proved erroneous, Darwin's method will finally lead us to truth. Deduction leads to vacuity and pessimism; induction, at least to optimistic hope. No longer must the carnivorous tiger of pre-formed theory be permitted to pounce upon the guileless facts. He must be slain with that modern weapon of precision, induction.

When we set ourselves to observe facts and draw inferences from them, we soon find that all objects cluster in two great categories: All things are either living or non-living; that is, the term life is definitely ascribable to, or deniable of, every fact in the universe; the qualities of living things clearly differentiate them from all other things. When you hear some long-eared materialist talk about "The life of a crystal," or the life of the earth, or of the sun, you know at once he is a psychic plebeian, no more to be taken seriously than the "solar biologist." Every living thing shows assimilation, self-motility, and sensitiveness. Anything not exhibiting these qualities is not living.

Moreover, the condition of all thought-transfer is agreement as to the meaning of words; to talk about the life of non-living things is philologic nonsense. When one hears an agnostic or an atheist contending that he is religious, or a materialist chattering about the universe being "alive," one almost wishes to shut them in a deaf and dumb asylum, or to secure commitment there for oneself.

My friend demurs at my dualism, but if he stands honestly on induction there is not a scintilla of scientific justification of monism. Spontaneous generation is disproved nonsense. No observation has ever been made of matter creating life, or of life becoming or causing matter. What has never been observed or known to have taken place—well, let us not be too cynical, but let us not waste more than a second of precious time, or more than a single spasm of our *levator anguli oris* muscle in a derisive smile of pity concerning it or its poor eulogizers. When the medieval scholastic could find nothing else to do, he devoted his mind to the solution of the awful problem, "How many thousand an-

gels can dance upon the point of a fine needle at the same instant of time." He was the prototype of the modern monist. When you inquire what monism is, you find that it is a wishy-washy obfuscation as to the distinction and definition of words; a namby-pamby desire to spread an obscurantist curtain of unity and identity over things that a clear eye sees are nonidentifiable, and that no eye, normal or blennorrhagic, has ever seen fuse into unity.

There are several arguments for monism which seem quite strong to some, but which seem very weak to me:—

1. The law of casuality, it is said, demands a primal unity as the basis of all reality. To this there are two perfect answers. If "God" made both life and matter, who made God? If the law of mind is valid and forces the question as to some things, it forces it as to all things. It is mental trickery to stop at one point and say that casuality ends just there. The law of casuality is not thus satisfied. The second answer is also as convincing: We find in our minds the demand for an ultimate cause, and we cannot escape its strin-

gency. But this is solely the product of the inherited results of our personal biologic experience, an experience which observation proves to be that of one planet's life, and of one set of conditions of life. It is easy to see that there may be categories of existence in which the law of casuality would ultimately have no necessary application or stringency. Do not let us take our individual or racial or cosmic experience as the absolute test of all objective validity. There is certainly no *a priori* necessity for doing it.

2. A more practical reason for monism is the feeling of many that we must be loyal to God; *i. e.*, he is so near omnipotence and omniscience that he must be really all-causative, absolutely all-powerful, and entirely all-knowing. But a least instant's observation shows that every one of his organisms from birth to death is struggling with difficulties and imperfections. A little observation would also show that God makes mistakes, and very often too; all teratology is one small proof of this. Then it is indeed consummately poor praise of God to credit him with some

of the evils and vilenesses of the world. There is no escape from the dilemma that either he does not wish or that he cannot do some things differently. If he does not wish to do some things he is certainly not good, if he cannot do them he is surely not omnipotent. In either case he is not the God of the old-fashioned idea.

3. Then there is the flatterer, and it is a sad fact that much theology is the product of a rather cheap sort of selfish flattery of God. It is safer to credit God with all powers; it is also easier. A man once told me confidentially and as if he didn't wish to let God overhear him, that the Bible and the creeds were perhaps not true, but it would be safer not to act on that supposition, as, after all, they might be true. It is a bit of ancient wisdom that to flatter tyrants is the shrewder way of getting on with them,—and the old divinities were most of them tyrants.

4. There is also the positive shirker of sin, the professional scapegoater. The old theologies are full of this philosophy, the doctrine of the vicarious atonement being a scarlet example. The popular

hymnology of evangelicism reeks with slimy morbidity. "Jesus died and paid it all, all the debt I owe," and "There is a fountain filled with blood, drawn from Immanuel's veins; vile sinners plunged beneath that flood lose all their guilty stains;" were bellowed into my childish ears by fat hypocrisy and lean frenzy.¹

5. There remains the monism of pseudo-scientific materialism, one of the many disgusting products of prejudice and psychology cunning, not infrequent among a class of folk who conceal their asses-ears of atheism and materialism beneath the lion's skin of science. Morality, kindness, social duties, obedience to aspiration and the still small voice—these things bring pain and

¹ Froude quotes a conspicuous example, an English Evangelical hymn:—

Nothing, either great or small,
Nothing, sinners, no;
Jesus did it—did it all
Long, long ago.

Cast your deadly doing down,
Down at Jesus' feet;
Stand in Him, in Him alone,
Gloriously complete.

endeavor, and many avoid the pain and duty by drowning conscience in the assumption that science demands materialism, and hence of course determinism. Heredity is their new Fate, and Law—with a big L—is their new god,—with a little g. These people have been taken off with a sting of truth, in the following jingle:

“To cut my burden short
It is rather rough to thwart
A soul that would propriety pursue;
When I want to be a Saint,
Says Hereditary Taint,
Better do a little sinning, and I do.”

The truth, of course, is that any attempted investigation of ultimate origins and causes is utterly futile. The problem is beyond our mental reach. Monism may be true, or dualism or many other -isms,—but we can probably never know which. All are at present equally unthinkable. Monism, however, I think distinctly immoral, because, shirk it as one may, deny it as one will, the inexpugnable fact remains that in its psychic results monism, any conceivable sort or kind of monism,

is only another name for fatalism. Out of its cruel face stare the hideous eyes of determinism, and no human heart can help being turned to stone by their gorgon glare. All that one can say of dualism, the dualism of life and matter, is that it is the best provisional or working hypothesis that has been offered or that is thinkable. So long as spontaneous generation is an exploded fallacy, any scientific-minded person must admit our hypothesis to be the only theory to which the facts will lead by the inductive method. It also permits and demands freedom, aspiration, energy, coöperation with God, religion, hope, etc., as the requisites of right character and conduct.

When we pass by strict inference from observed facts to the largest justifiable generalizations concerning non-living things, we finally reach the atomic theory as the necessary basis of all exact science or physics. Although it is called a theory, it is strictly an inductive conclusion, the foundation of all physical and scientific investigation. If one does not admit the substantial verity of that induction, there

is no use of speech; language itself becomes meaningless, and thought comatose. Whatever may be finally determined as to the nature of atoms, vibrations, ions, electrons, etc., we wander in the blank inane of psychic emptiness without the laws of the atomic theory upon which rest physics, dynamics, chemistry, and upon which again is based all other knowledge. If one think accurately or observe mathematically, atoms, whatever their construction or nature, are the bases of physical things and the causes of physical forces.

But whether gravitation is explained or not, it is unthinkable that matter can have been created, or can be annihilated. Whatever else is true or false, matter must be uncaused, self-existent, eternal and eternally obedient to the fatalisms of its inherent nature, displaying no evidence of design or purpose, each atom following mathematically and invariably the stresses, propulsions, etc., of its conditions, and according to its molecular weight, specific heat, etc., etc. The fatalism of matter, the rigid necessarianism of the inorganic universe, is the truth hidden in and justifying the

human belief in fate, the limitation of free-will, etc., which no dogmatism or creed has ever been able to banish from the mind of thinker or of devotee. However free we are, or may be, behind the daylight freedoms of our sun-blinded eyes, there are the billions of stars of limitless and eternal fate which the illumined night of reflection reveals in the boundless stretches of the physical universe.

Moreover, the infinite extension of this physical universe is as certain as gravitation itself. If there existed anywhere a limit to the stars of space, then there would be a somewhere-existing center of gravity for all the suns of space, no matter if their number ran to unwritable strings of figures. As infinite time is also an axiom of thought, as well as an inference from the uncreatedness of matter, however far removed from the assumed and necessary center may have been the supposable farthest star, not only itself, but every other bit of matter must have long since thundered to one central sun. Hence it is sure that every star is held relatively in its place in the sidereal universe by the

infinite number of stars and worlds upon every side of it. Its free-will is represented by its tiny revolutions, and, perhaps, some glimpsed directions of solar and stellar motions, but its fate is that of a surrounding and absolutely limitless stellar host beyond all cognition of the imagination or of the mathematical faculty. Spectrum analysis makes it certain that the suns of space are composed of the same kinds of atoms as we have here in our own sun, and if, as now seems probable, matter is simply condensed ether, then space by double proof is a plenum, and nowhere is there a vacuum. The "tragedy of astronomy," the awe-struck horror of the "pitiless stars," is thus converted into the security of neighborliness and of physical connection with the whole mechanism; no universal cataclysm or catastrophe is possible. Emptiness gives place to fulness, and our feelings of banishment, lostness and orphanage are replaced by those of acquaintanceship, comprehension, and even to some extent of mastery. Cosmic horror is supplanted by cosmic admiration and understanding.

The woe of mystery ends in the delight of comprehensibility.

But what is this that comprehends, that feels and loves, that looks out upon, that can will, and that can move by a wish one or two hundred pounds of sweet, sensuous, mysterious, carnal mechanism? What are these others like ourselves that we see, and that speak to us? What are these, our brothers the animals, who can not speak, but in whose lambent eyes we look and find a dumb pleading for love, for humanization, and for spiritualization, and whom we find essentially one with ourselves? What of the grass, the flowers, the grains, and the trees, whose fate is bound up with ours, and whose true inner being, again, is at once recognized by a keen eye as identical with that of our own? What, in a word, is life? What is that subtle flame of soft spirit reining to unity every part of our bodies, endowing each with continuity, obedient even to our unconscious wish, and in feeling and intellect rising to self-consciousness, to purpose, to the making and the mastery of destiny itself? Has this any likeness to, or any relationship

and unity, conceivable or observable, with the matter of the non-living worlds? It is logical blasphemy to suggest it, and scientific nihilism to assert it.

Any physicist who understands "the mechanics of a closed system," any chemist who knows of the release of energy in a disintegrating and simplifying molecule, any physiologist who has caught a glimpse of the physics of digestion and assimilation, knows well enough that the physical energies of the living organism are gained by the utilization of the liberated forces of a complex molecule, first anabolized or built up by life, then katabolized by the same power when and where the liberated force is desired. Something like 5,000,000 blood-cells, it is said, die within us every second, and 5,000,000 new ones are created and vivified to carry on the work. Thus all vitality is supported in its world-work by the dissipation of energy released in the disintegration of a complex molecule of matter. The mechanism of assimilation, of heat-production, of movement, of every bodily function, is that of the continuous indrawing of streams of complex molecules

in which are locked condensed atomic motilities, of building them to greater complexity, of extracting their energies by disintegration, and of discarding the refuse and the used-up material. To be alive is to do that; what does not do this is not alive. But it is quite clear that the directional power and intelligence which does that can never be identified with, is infinitely other than the poor blind fatalistic, impassive atoms, molecules, and materials thus used. The nail and the hammerer, the engine and the engineer, belong to irreconcilable categories of existence. No monist has a glimpse of genuine scientific methods. He has not learned the A-B-C of science, which is the recognition of differences in observed facts.

Parenthetically it should be observed that in the vegetable world life has learned, and in the animal has unlearned, the art of building up the relatively simple vegetal protoplasm from inorganic materials. The tree or plant takes up the purely mechanical molecules and anabolizes them to vitalistic complexity. The animal has lost this power, finds it too difficult, or rather

unnecessary, and so utilizes the complex vegetal protoplasm as the ingestion-material or basis for the still more complex bioplasm of the animal cell. Thus, all animal and human life depends upon the vegetal world for food and existence. It does not follow that this is the only function it serves, nor that we have not many other relations, ethic, esthetic, etc., with the vegetal world, than that of ruthless food-getting.

Now, every mind which is desirous of understanding itself and the world, which is unhappy in the presence of mysteries not necessarily insoluble, soon meets the physiologic mystery. "*La première chose,*" says Pascal, "*qui s'offre à l'homme quand il se regarde, c'est son corps.*" If one have any genuine scientific animus he will speedily advance from the large facts of motion, for example, or sexualism, to the more intimate and essential ones, *e. g.*, of nutrition, nerve-communication, and unity, etc.; and if he is in downright earnest he will before long arrive at the question of the mechanics of all vital activity in and through the cell—the physiologic

unit and elemental component of all organs. Cytology is the beginning and foundation of all genuine philosophy, the suggester and controller of all ethics, the way to reach vivid, legitimate, and real religion. Grasp your religion, your philosophy, your esthetics, or your ethics, by deductive methods out of the abstractions of your own mind (your mind which itself is the abstraction of abstractions), and you float in the lawless incertitude of ethereal subjectivism, without the quickening breath of oxygenating air to stay your fluttering heart, without the earth of reality to support your propless feet. Study rather the pathology of inflammation, get down your microscope and watch the white corpuscles in the blood-stream crowd about a wound and plunge through the rent vessel-walls to repair the damage and heal the part. It soon is clear that each blood-cell, and every other cell in the body, is ruled from within, is an individual which coheres from choice and self-sacrifice with others—a million here shaping themselves one way, another million elongating, or flattening, or hardening; this billion taking one function, an-

other a different function, etc., until thousands of families tell themselves off to a thousand different labors and duties. But whatever the work, or shape, or place, each cell acts as an individual from within, not by constraint from without. Its ruling power is from its center of life within itself. Its nutrition is effected the same as that of the body; it draws into itself streams of food, accepts some, exhausts the force in the complex molecule, utilizes the sucked-out force, and excretes the useless debris. Can a bundle of mechanical atoms do the like? It is clear that intelligence, purpose, ethics, self-sacrifice—control, in a word—reside at the heart of the cell. But as all cells of the organ and body ally and sacrifice themselves for a common end, the cell-intelligence must find a common unity in an intelligence behind all cells, whereto all lines of direction lead, and whereby all are governed. Life reaches control of physical forces by the cell-mechanism, and, so far as we know, by it solely. No inorganic molecule shows any evidence of intellect, design, or purpose. It is the product solely of math-

ematically determinate and invariable physical forces. The cell always exhibits intellect, design, purpose, ethics, and mechanical genius. Nonliving matter is utterly fatalistic, externally governed and self-satisfied; the living cell is free, internally governed, and finds the end or object of its existence elsewhere and elsewhen.

As we thus observe cells of myriad shapes, natures, and functions, each directed from within, fuse themselves to organs, and organs again cohere to form the complete animal organism, it commences to break in upon the wondering perception that the cell-mechanism is life's method of getting entrance to the nonliving world; moreover, as every cell exhibits all the attributes of personality, loyalty, self-sacrifice, ingenuity, intellect, far-away planning, etc., etc., it grows plainer that temporarily the cell is life's domicilium or home, that life itself is incarnate in the cell. If you wish to say *Biologos*, or *God*, instead of *Life*, I heartily agree, and we are face to face with the sublime fact of biology: The cell is God's instrument and mediator in materiality; it is the mechan-

ism of incarnation, the word made flesh and dwelling among us.

And this is my criticised dualism. If, however, you can satisfy any demand of scientific intelligence by identifying the materials used, the molecules drawn in, sucked of their power, and again thrown out, these stupid, brute, fatalistic, dancing atoms, with the intelligence, purpose, love, ingenuity which uses them as mere tools,—then you and I part company. It is not very flattering to a watchmaker to say to him that he and his tools and his watches are fundamentally the same. The watch may feel complimented, not its maker. Monism is as impious as it is unscientific. Let us have done with all the pantheisms, materialisms, and idealisms, whose wreckage fills the lumber-rooms of the past. The nonliving universe is made up of driven atoms in various stages of close or wide conglomeration, uncaused, discrete, eternal, purposeless, fatalistic, betraying no trace of personality either in origin or action. The living cell shows personality and all its attributes, building a complex and marvelous tool out of the

dead atoms, and every organism of cells in all the world is fused into harmonic unity and continuity with every other by lines of directional control centering in what we represent to ourselves by the word God.

Human personality therefore can only be a unity of greater differentiations of function, a higher and fuller incarnation than the single cell-incarnation. Life, or God, is in the cell. It is He incarnate, ceaseless, sleepless, absolutely present, instantly acting. The cell's intelligence is His. The human personality is also at last Himself and only Himself. Our freedom is his freedom. Our self-consciousness is made possible by such perfection of the organismal mechanism that to it may be added the deputation of control, denied to the lower or less perfect organisms by the very fact of their imperfection as organisms. But our self-consciousness is only a degree of His, largely dependent upon our loyalty (*i. e.*, again, upon the perfection of the mechanism) in recognizing and accepting His designs as our personal ideals.

His designs—ah, but what are they? What is the object of Life? What is God's purpose with us, and in the process of cosmic incarnation? It seems somewhat strange that philosophers, system-makers, they especially of the ethical and religious kinds, should have been so indifferent to the most important of all questions, the object of the world, or of life. A rational ethic must, of course, be absolutely conditional upon an answer to this question. To any reader of history or careful observer of his fellows, it must be plain that men often do evil by the most sincere obedience to conscience. Men are usually willing to do right, indeed do generally obey their consciences; but willingness and obedience do not tell what is the right. All action that is right in result, as well as right in motive, must depend upon really carrying out God's wishes, upon what His wishes are, or upon what is the final cause, as the theologians would say, of existence. To me the inorganic universe has no cause, either first or final, and any attempt to think teleology into lifeless matter will result in a whirling dervish-like ecstasy of

mind, or an atheistic pessimism. If God is responsible for that, I will none of Him! He is then utterly unthinkable, unknowable, and unlovable.

The old theologians occasionally tackled the question, but their answers as to the final cause were sad evidences of their disrespect for themselves and for God. If "to praise God and to enjoy Him forever," be the end and aim of existence, I think "existence" would better never have wakened out of Schopenhauer's famous *Nichts*. The truth is, that starting with the deductionists' God, omnipotent and responsible for the creation and upholding of the entire universe, there is no conceivable object of existence. We settle back into the practical atheism and intellectual nihilism of the majority of mankind. The mind balks and rebels at too much God, and in teaching theism the old "God-drunken" teachers made atheists, in much the same manner as Bishop Butler did, by proving too much. I am also profoundly convinced that a vast deal of the pessimism and sensualism of the world is due to the inconceivability by deductional methods of any

object or final cause of the world. So long as the Gorgon of an omnipotent Creator, responsible for the universe, stands at the entrance of the intellectual temple, the very blood and marrow of reason is frozen by a simple glance of its stony and fatalistic eyes. If this is so, then such "theism" is criminal. For my part at least, Heaven preserve me from this sort of monism! From that trance of death-like abstraction my dog's nose, thrust under my hand, begging for love, brings me safely back to reality and sanity with tears in my eyes. For, when one of my God's creatures wants something, it is He that wants it.

If we look at the great incarnation-process in its entirety, as a world-phenomenon, we find the most inclusive generalization to which all of the facts lead up, is that by and through the process, *Biologos* (as I call God) is each instant gaining an increased control of the forces of the non-living universe. Every increase in the numbers of humanity is *per se* an added victory; but by civilization the very forces of the solar system are being harnessed and broken to Life's intent and use.

Every discovery in mechanics, physics, chemistry, and in science of all kinds, doubles his control of the forces of the physical world. So amazingly rapid is this gain in directional control that one almost hesitates to set any limits to our future domination over and use of the physical forces of the universe. We may yet visit Mars! Every gain is at once put at the service of all men for their intellectualization and spiritualization. The object of Life, then, presents itself to me, at least tentatively, as the mastery of physical forces (through the mechanism of the cell) for Life's directional control, and the rationalizing and spiritualization of humanity. Other and deeper objects may lie concealed behind these plainest ones, but these primary ones are patent to eyes that desire to see. The glorious words of Christ, startling in their prescience, are likewise those of Biologos: "I am come that they might have life, and that they might have it more abundantly." Fullness of life, perfection of life, control of power, these are the things most profoundly desired by every human heart; viewing the mechanism and progress of

the incarnation-process they are also precisely the things God most desires.

But to desire things is not to have them in the case either of cells, of plants, of animals, of men, or of God. The invasion of the material world by Biologos shows strain, struggle and incompleteness, during every instant of history and throughout the biologic world. This is the most appalling and the most evident of all living facts. Every cell of every living thing that has ever existed or that exists to-day is carrying on its function with effort, forestalling disaster, healing hurts, nourishing itself with consummate solicitude and foresight, and fulfilling its duty with loyalty and self-sacrifice that is simply divine. The same is true of every congeries of cells called an organ. Only the physiologist and physician can realize the intensity of this endeavor. The same is also true of the congeries of organs called the individual. No weed, grass, tree or animal, but that has attained its small degree of perfection by the thousands of mechanisms of offense and defense which botany and zoölogy cannot even catalogue, and every

one bears the pathetic marks of imperfection, enemies, disease, scars, frustrated endeavors, and the rest. All archeology and history are the records of man's struggle; is there one of us to-day in this world of 1500 millions who is satisfied and undesiring? And there, soon or late, stands certain death awaiting every cell, and every individual, whether plant, animal, or man! By the circumvention of sex and reproduction death is cheated of complete victory, but at what expense to the process, and to the process-maker! But if all things that live do so with every instant's struggle, if imperfection, want and death, stamp every product, is the producer, God, then, not finite, and a struggler, all too pathetically far from omnipotent?

And if so, is His heart not as full (nay is it not more full?) as yours of unfulfilled desire and thwarted effort? Is not every failure his failure, and every success also His success? Your suffering is His suffering, your tragedy certainly is His.¹

¹ Since the above was written, I find in Professor Royce's *Studies of Good and Evil* the following: "The only possible answer [to Job's question] is one that

Ὁ λόγος Σαρκὶ ἐγένετο is the truth of Scripture, but how more enormously, more sublimely true it is than the Bible-writers dreamed! Every cell of the billions of your body is His handiwork, and the coming to consciousness of the human bundle of these cells is His success in perfecting the mechanism, and our acceptance of the duties of becoming His deputies. Freedom and control are offered us on condition of loyalty, and this loyalty is the basis and warrant of all rational and practical ethics. His plain aim is to extend and perfect the incarnation-process; ethics and duty consist simply in helping God, nothing else! The function of intellect consists solely in understanding first the material upon which and through which God and

undertakes to develop what I hold to be the immortal soul of the doctrine of the divine atonement. The answer to Job is, God is not in ultimate essence another being than yourself. He is the Absolute Being. You truly are one with God, part of his life. He is the very soul of your soul. And so, here is the first truth: When you suffer, *your* sufferings are God's sufferings, not his external work, not his external penalty, not the fruit of his neglect, but identically his own personal woe. In you God Himself suffers, precisely as you do, and has all your concern in overcoming this grief."

man must both work, and second, the laws of vitalized matter, and the adaptation of means to the desired end. Esthetics is the beautification of the process and delight in it; and religion is love of the process and its Author.

"Be ye therefore perfect even as your Father which is in heaven is perfect." Are these electrifying words of the world's greatest teacher longer to remain a meaningless and stupefying paralyzant of awed finiteness? Did Jesus mean anything by them? Are not his words usually amazing revelations of terrible earnestness and reality? If the heavenly Father is the infinite and awful being of philosophy and theology, the command of Jesus is simply nonsense. But if the heavenly Father is the most learned of all physicists and chemists, the prototype of all chemical synthetists and physiologists, the most consummate of all mechanicians and artists, then is He the artificer of civilization and the "elder brother," whom we can in truth imitate and love. It seems clear, therefore, that the beginning of philosophy is in physics and chemistry, and the starting-

point of all true theology is in physiology. God's primary perfection, as seen by induction, consists in His knowledge and control of molecular physics, and the building of the organic molecule. The cell, so far as we know, is indeed His sole method of entrance into matter and His single means of control of mechanical forces. Those who utterly ignore His first, greatest, and continuous method of work are surely poor lovers and imitators of Him. They are not very consciously striving to be perfect as He is perfect.

God's greatest difficulty and sorrow is denutrition and disease. Every living thing is thwarted, stunted, scarred, imperfect, and His most wondrous ingenuity is to overcome and circumvent the ills that beset the evolution and limit the life of every organism existing on earth. Nobody can realize this as can the physiologist and physician. From before conception or fructification, the strain and the eager attention, the every-instant's care of every cell and of every organic bundle of cells, is profoundly devoted to keeping up the minute mechanisms of nutrition and

in preventing and overcoming harms and curing diseases. I have heard that the root of a bit of prairie grass has been followed sixty or seventy feet straight down through the dry, arid sands to tap a more moist stratum, and any physician who has seen the human organism struggle with disease for a life-time, for several consecutive life-times,—any such physician who is an atheist,—well he is a poor physician also! God is the first and the ideal of all physicians. All our science is learning His methods; all our art consists in helping and imitating Him. May we some time be as perfect physicians as He is!

And thus by induction we at last secure a clarifying and enlarging view of the world's problem of evil. In its last analysis evil is but another name for the difficulty of cellular and organic nutrition. What are love and sexualism and all their consequent evils but the circumvention of organismal and cellular death, the problem of the running-down mechanism? Death is only the impossibility of making a perpetually active cell-mechanism. The individual life is a truce with matter, which

will not allow perpetual motion of a system. Sex and regeneration are the devices for continuing the truce, and outwitting the fatalism of matter. Look at the affair closely and it is seen that all war, slavery, disease, all evil whatsoever, any question of inethicality, is at heart and at base a question of nutrition—cellular, organismal, social, national, or cosmic. Every advance in civilization is but a partial conquering of this nutritional difficulty. All health, beauty and joy is the more or less perfect, and, alas, temporary solution of the nutritional problem, a victory of the constructive forces of organic life. Play is the expenditure of an overplus of victorious force.

We thus surely reach an adequate conception of sin and error. To imitate God, to be perfect as He is perfect, is the command of Christ and of biology. The ideal of all human character and the end of all endeavor thus become the participation in God's work. We are good in so far as we are His actual coworkers and helpers; we are good-for-nothing just in so far as we fail to help. Sin is the conscious re-

fusal to help the incarnation-process, traitorousness to the evolution-ideal. Error is failure, from ignorance, selfishness, etc., with varying degrees of consciousness, to understand what God is doing and how He is doing it in this world. To further the objects of the process, willingly, obediently, lovingly—this is our one sole duty. The stupid error of the old subjectivists, of the outworn philosophies, monisms and deductions, the sin, downright sin, of the outlived and antiquated theologies, consisted in not studying facts, not finding and teaching an object of life. Ask any one of all your acquaintances what is the purpose, end, and aim of existence, and his mind is a blank; probably he will think you decidedly daft. But ask him to undertake a labor that will require years or his lifetime, ask him to travel with you to the middle of the ocean, or of the Sahara desert, and he will ask you for what end. Now has all this strain and million-year endeavor of the biologic process no end in view? God forbid! But if not, if the negative answer of all subjectivism, if the silly fuddle of the theologian's answer is

allowed, then we end in pessimism and materialism, and we get the result we see—the poor Asiatic Buddhist scheming to undo the incarnation-process, the active and sane Caucasian plunging into the mad whirl of pleasure-seeking, or the dehumanizing fury of money-getting. At the door of the subjectivist, the so-called philosopher and theologian, was laid the pathetic and orphaned foundling of modern misery. Science and its civilization had to take the refused gift, nurse it in its hospitals, train it in its industrial schools, and put it to work in its laboratories and workshops, all to fit it for a coming and renovated future. One Stephen Girard, or one Virchow, is of more value to God than the combined system-spinners of metaphysics and theology since man began to watch the whirring wheels of his own thoughts.

The mechanism of the cell and its nutrition constitute, then, the fundamental means whereby the incarnation-process is carried on. The simplest observation of this process as a whole shows an increase of the control of the physical forces of the

universe, an extension and perfection of life. All history exhibits a progressive spiritualization or civilization by means of the forces gained, and every glance into our present world shows this process reaching to a future greater control and to a rapid progress in knowledge, comfort, art, and power placed under the rule of Biologos. Again the sublime, prophetic, the godlike words recur to the astonished memory: "I am come that they might have life, and that they might have it more abundantly." How closely do true religion and true science unite in work and ideal! The object of life, of Biologos, is plainly the extension and perfection of the incarnation-process; it is to dominate the dead physical forces of the universe, to make them the servants of spirit, to increase the sum-total of incarnate life, and to exhibit the essential qualities of life, which are ingenuity, power, love, beauty, freedom, etc., so fast and so far as the thralldom and inertia and death, the fatalism and infinities of purposeless matter will permit. In a word it is to vivify the

objectless world of infinite matter, to thrill the dead universe through and through with God's own life.

To aid the process, I repeat again, to help God, is the aim of all endeavor, the ideal of all ethics, the test of all worth, and the decision as to all sin. I had intended to show how this test will lighten and clarify all history, but I fear I have already taxed your patience. I wished to cast a glance into the night of archeology and prehistoric darkness which envelops our noon of to-day. For example, the traveler in some dense tropical or semi-tropical forest comes upon a hint of the old crime and error in the shape of a crumbling and ruined palace, built untold thousands of years ago by the enslaved energies of millions of men, for the greed and pride of one, or for mistaken worships and useless ends. The final purposes of the incarnation-process were not served by these nations or by their endeavors, and the ruins were covered with the better life of vegetation. The pyramids and the sphinx of Egypt,—for what were they

builded? The wastes of sand at their bases are not more purposeless.

The purposelessness of Asiatic life, the twilight glooms in which our historic eyes lose clear sight, reveal the same disregard for the extension and perfection of the evolutionistic life-process, and we watch all such lethargic nations sleeping out their half-failed and now rapidly dying life. In clear-eyed Greece, History seems startled to a semiconsciousness, and to have looked about her like Doré's frightened young monk; but she was careless of the other, of the slave, on whose back was burdened her labor, and of the "barbarian" she scorned; she failed to catch the hint of induction, obey the duty of observing, did not grasp the offered hand of Science, dreamed her platonic dreams, scoffed and laughed with her Aristophanes,—and was conquered by the more virile Roman. Hard-eyed, selfish-hearted Rome conquered the world, taught it a rough lesson of justice and of power, but at last became gluttonous; the cosmic parasite sucked the juices of her host too cruelly, and the freedom-loving,

forest-bred Hun struck the tyrant a death-blow. "The ghost of the old Roman Empire sitting on its own grave," as Catholicism has been not untruthfully described, formed at least a sort of carrier of the classic result, a transmitter of the book of wisdom to the modern nations. Spain refused the wisdom, and, in the ruthless despoliation of intoxicated selfishness, committed every crime against the biologic process that was conceivable. God's splendid irony is shown in the fact of her handing over to the rulers of the very world which she had discovered, and had ruined with rapine, the keys of misused power, with the unconfessed *Peccavi* of callousness, ineptitude, and defeat. The Teuton again showed his warrant to life from the God of Life. France forgot the nutrition-lesson, and despoiled her serfs—82 per cent of the productiveness of her worse than enslaved Jacques Bonhommes being demanded for her Versailles and its hideous gaities. Again the parasites forgot the simplest lesson of self-interest in the treatment of their host, and the maniacal fury of the Revolution was a fitting

but fatal atonement of Bourbon sin. She then turned her self-torture upon the outside world, and the Teutons again had to teach the old lesson to the Napoleonic forgetters of God. In reducing her birth-rate to an equality with her death-rate, this demimondaine of the nations has given the most downright insult to the incarnation-process, and the Dreyfus exhibition of dishonorable "honor" reveals the swiftly-coming and deserved end. Thus the Greek and Latin type of character, built upon parasitism and the indifference to and spoliation of the organic sources of its life-process, is passing away, and the democratic Teuton, the Anglo-Saxon, has already inherited the world.

And why? Because he furthers, not despoils, aids, not hinders, the incarnation-process. This is the light that reveals a real philosophy of history; send its searching rays out among all the tangles and mysteries of history and it reveals the reasons of failure and the causes of success. Does the average of a nation's activity and character, under the existing circumstances, conduce to the general ex-

tension and perfection of biologic evolution? If so it dominates and inherits from the less helpful the control of the lands and opportunities. A volume could be filled with illustrations of this truth. One alone must suffice: Why is England the best and most successful colonizer the world has ever had? Solely because she encourages the people she subjugates to fuller and larger life. She does not rob them of the products of their labor, and she forces them to be just to one another; that is, to allow each and all to participate in the extension of the great life-movement. God is a free-trader.

And that is the lesson also of all institutions. Do they help in the incarnation-process? If so, they live, in spite of all their lesser evils. Do they not so help God? They die, despite a thousand other heavenly virtues and innocences. From birth, asceticism is stung with certain death. Religion itself, if it forget the nutritional and life-increasing duty, must be buried out of sight of living things.

Roman law, all laws that men put in force or obey, are but corollaries of the

command of Biologos, to help Him in His work of life-extension and life-perfection. The legislatures or the judges who fail to follow that Ariadne-thread miss their way—fail in their vocation, and their labor comes to naught.

Only when medicine got its microscope and began studying the intimate processes of cellular structure, cellular laws, cellular pathology, and physiologic chemistry, only now, that is to say, has medicine become the ally of the divine Pathologist and the coworker of the heavenly Healer. Only when theology descended from metaphysical moonshine to vital social duties,—that is, only when theology became religion, has it been vivifying, useful, and shown growth-power.

Only when speculative philosophy became science, when Hegel was renounced and Darwin born, did light begin to come into the chaos of systematic thought, and the intolerable mystery of being.

Only when charity—selfish, subjective charity—became objective and scientific—only when it studied the thing it did—only then did charity begin to lessen instead of

increase the very suffering with which it busied itself. “ ‘Sound men,’ said Justice to Charity, ‘are made cripples by the use of your crutches.’ ”

Only when science began studying the world of plants and animals did we begin to know of the unity of all life, of the interdependence of man and the lower forms. We are only now becoming conscious that we have duties to trees, ethical relations with insects, and interests in birds, that may not be ignored.

Lastly, only when man began to study and imitate God’s organic ingenuity were brought forth those modern inventions—the steamship, railroad, the printing-press, and all the rest—whereby the whole problem of nutrition, the feeding of the world, the prevention of famine, of localized war and evil, and the spread of intelligence, have been secured. Modern commerce and civilization are in essence and result primarily the mechanisms of securing the organic unity of the world, of preventing localized waste, of forfending the nutritional evils of isolation.

With this key of all ethics in our hands,

we may also open the closed mysteries of many social contradictions about us to-day. The institution or custom that hinders or does not help toward extending and perfecting the biologic process is as surely doomed as it is sure that God lives. Luxury, for example, is often but another name for parasitism, of eating more than is produced by the eater. Life will crush the ruthless seizer of the products of other men's lives for personal consumption. Wealth is *per se* no sin, nor is it necessarily a proof of sin, but the use of wealth for self-glory or self-satisfaction, regardless of whence or how it came, or whither it leads—that is mad disloyalty to the incarnation-process. We must not be deceived: God has a cunning way of using self-seekers for the common good, and tricking them out of their game; moreover, it is the equivalence of service that is the point, not the expenditure of effort or correspondence with false ideals of duty. One hour of "duty" may yield an overplus of good above fifty years of "sin," or fifty years of duty may be lost in the ruin of one moment's error. The tree of life can

only be judged by its fruit, and one saved seed or grass-blade may be the means of covering with vegetation a devastated country.

One of the ominous signs of lethal luxury is that the energies of the life-process are being too much extracted, and too selfishly used by the so-called "ladies" of fashionable, or would-be fashionable, life. Millions of American women are fast learning some deadly sins, aspiring to dolessness, irresponsibility, hysteria, childlessness—"ladyhood." Much of the guilt of France will be forgiven her because her women have learned in one way or another that muscular action is the condition of health, and that responsibility develops mental power. We shall have yet to pay dearly for our cruel kindness and morbid chivalry to women.

And for the political leaders who do not lead, for the demagogic statesmen, for the bosses who through bribery rule for themselves and their "pals," not for the people—for these are we not already paying a high price? For imperialism when we cannot govern a few Indians, or even our-

selves, for millions of disfranchised men in a democratic country with a fifteenth amendment, for extension of rotten government over a thousand or two islands—what indeed shall we not yet have to pay for these and for many such things?

For governing the personal life, for the guidance of conduct there is no rule so comprehensive or so comprehensible, none so applicable by each, as this of the duty of coöperating with God, of aiding Him in His biologic work. All accepted ethical laws are but corollaries of it, and the simplest mind can at once test the virtue or sin of an act or temptation by this touchstone. The decalogue is the expression of a few simple phases of it, and codified law is a reaching out towards its logical and actual validities. Conscience tells us to do right; but only study of the incarnation-process can tell us what is the right thing we should do. Increase and replenish the earth is, for instance, the primal command to ameba and to man, and the man or the people that too generally disobeys, that cheats sexualism of its object, that makes marriage an affair of money and bargain-

ing, that legalizes prostitution within or without marriage—that person or nation is doomed. Individuation, or individualization—self-dependence—is a fundamental law of the biologic process, but communism, socialism, too much paternalism in government, too much “charity” and sentimentalism—all have their condemnation in a biologic necessity none may wisely ignore or safely seek to cheat.

Into the process of organic evolution there has been injected one quality which on any ground of materialism or utility is unaccountable. Whenever it has been possible, beauty has been added, and even when it has positively endangered the process itself. A few years ago a single scarlet tanager visited my country home, but now he comes no more. There is something far more and other in the flower than is demanded for plant-propagation,—nay, to bring the matter to its last analysis, the chromatic sensations of the eye are infinitely more sweet and wonderful than are required to differentiate objects by ethereal vibrations, and sound is far beyond the suggestion of air-waves. Thus Biol-

ogos is the greatest of all artists, the first lover and maker of beauty. What theology has so brought Him to men's minds? That beauty has been added to the incarnation-process as a pure gratuity, and not seldom to the harming of that process, is more than a hint that once this process is better assured and perfected, it will be literally flooded with a fulness of that divine radiance of smile and benediction whereof we have little dreamed. The tolerance of sin and a seeming divinely artistic carelessness of what is conventionally called morality might suggest that the great Life-Lender cares even more for beauty than for so-called ethics. Surely Puritanism's conception of Him is very different from that of the naturalist.

Again let me quote from Jesus another astounding and wondrous command: "Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind;" I take it that means with all thy emotional nature, with all thy spiritual nature, and with all thy intellectual nature. With the best will in the world it is utterly and absolutely impossible for

any human soul to obey that order who conceives of God as the "great first cause least understood," of Pope, or in the way the philosophers and theologians demand. It is a psychic impossibility to love an omnipotent God, and no one ever did. Jesus and St. Francis loved God, but not the God of the creed-makers, nor of the metaphysic folk. No monist who has the faintest conception of what monism means can have the slightest emotion of affection for the "infinite maker of heaven and earth." Jehovah is a supremely unlovable and unlovely being. When I pretended to believe in Him I only feared Him, and when I quit believing in Him my concealed hatred of Him became conscious and rational. To love, we must feel the affection of the beloved one within, about, and over us, as a helpful, thoughtful spirit of tenderness, thrilling us with sweetest pride; we must also know, feel, see, and realize the very being of the loved one as like unto us, as finite, suffering, self-sacrificing, planning, tirelessly patient—in a word as like our best self in all essential nature and character. Allah, Jehovah, the absolute, the

unconditioned, the creator and upholder of the universe, etc., etc., is not such a being, and is a figment of the unintelligent, awe-struck imagination. Anthropomorphism is necessary to the conception of such a being and an anthropomorphic god is an ungod, a pitiable device of mental incapacity, and the product of mystical subjectivism. There is no fatherliness in him or to be got into him. To love God with our intellects is not to neglect His entire work in biologic evolution, not to ignore His purposes as revealed in the incarnation-process. Only the scientist loves God with his intellect.

But if we look with open eyes out into the world, first of our own marvelous bodies, and then of the splendid crowding of a million species of other living forms; if we behold the unrolling and the progress of these living forms from the primitive biologic ages to the present time; if we understand even partly the cytologic mechanism of this incarnation-process, and that all of it is reined to unity and comprehensibility by the fact that it is our Father's very life, lent to each, and welling up within

every one of us; if we feel that duty is His call to help Him, and beauty and love His rewards for our help—ah, then, we can love, nay, we cannot help loving God with all our heart, with all our spirit, and with all our intellect.

CHAPTER III

MATERNAL LOVE IN ORGANIC EVOLUTION ¹

IN his address before the British Association Lord Salisbury stated anew the three great mysteries to the solution of which science has in vain directed her attention. The origins of atoms, of ether, and of life, are to-day the most utter mysteries. To account for them no human mind has framed even the faintest concept worthy of consideration. We have only the merest hints of the possibility of explanation of gravitation; concerning electricity we are getting only a little better idea; but as to physiologic chemistry our little knowledge serves only to make our great ignorance more frightful. All origins of things are shrouded in impenetrable mystery, and our philosophies are but weak

¹ Read before the Wistar Biological Association, Philadelphia, Dec. 14, 1894; The Philadelphia Association of Kindergartners, April 7, 1896, etc.

and sorry attempts to widen a little the light-space about us. No philosophy and no religion explains finalities, and all efforts end only in resolving many lesser mysteries into fewer great mysteries. The conception of Biologos, incoming light and love, entering inorganic worlds and matter as a great incarnation-principle and spiritualizing force, electrifies and quickens the mental, imaginative, and moral man as none other; but, of course, it too ends only in a little broadening of the light-way about our darkness-encircled lives.

But it seems to me that so far as concerns the individual manifestations of life, we may and we must differentiate clearly between the love of one's own life and the love of the life of one's descendants. The cuckoo bird has not enough strength of the maternal instinct to build a nest and incubate her own eggs. In pigeons the male has a far stronger maternal instinct than the female, and in some other birds the male has resolutely to fight for and defend the eggs from the destructive habits of the female. Some animals will expose themselves to danger, even die most heroically

in defending their young, whilst the kangaroo mother, it is said, will, when hotly pursued, drop one or more of her little ones to lighten her load. In human life, also, as we well know, some people care little for children, even for those of their own flesh and blood, whilst others will sacrifice their own lives with most pathetic heroism for the education and up-bringing of their young.

It therefore appears to me plain that we should distinguish sharply between self-love and child-love. Fundamentally, I doubt not, they proceed from one ultimate unity, but in biologic manifestation they may be considered as two distinct exhibitions or phases of the life-force. One is devoted to the saving of the individual life, the other to the perpetuation of life in new individuals. It is perhaps easy to recognize the one as a blind, purposeless force, but the incoming of maternal love is not thus to be accounted for.

I have been forced to use the term maternal love in default of a better one to express an unnamed fact or generalization of facts much larger than that of

simple maternity. In many animals we find the father taking upon himself many of the duties usually fulfilled by the mother, and at all times the purposes and results of the genesial instinct are carried out by an intrinsically-interwoven and correspondent series of duties of both parents. Moreover, if we descend to the vegetable world the eye that is trained to observe facts rather than the accepted wordings and ideas of facts, sees everywhere that the phenomena of reproduction, whether in anemophilous, entomophilous, or cryptogamic orders, are really asexual, and the plants or trees themselves have no fundamental morphologic differences of structure due to sexualism. Indeed, the so-called "male" and "female" organs are often produced by the same plant, and even by the same twig and the same flower.

I have racked my brain to find or invent a term that should indicate the large biologic instinct that prepares the organs for reproduction, that begets, and that cares for the new being after it is begotten, whether it be in the plant, the animal, or the human world. We have observation of

a profound and unitary force that directly or indirectly dominates all organic life during almost every hour of adult existence. In the plant-world every function pertains to or ends in seed-production, and just as a father horn-bill reduces himself to a skeleton and utter exhaustion in getting and carrying food to his mate and nestlings, just as a human parent wears life out in heroic sacrifice for beloved children, just exactly so will a tree under like disadvantageous conditions of nutriment commit suicide in the production of seeds. An Indian mother, in order to rescue her baby a few feet away, crawls from behind the rock protecting her from the guns of United States soldiers. She knows the act may bring a bullet in her brain, but she saves the baby and dies. A hen in a burning barn gathers her chickens beneath her and is burned to a statuesque cinder, but the singed chicks are saved by the dead mother-body. Is it not the same divine love that filled both hearts? Is there anything else in the world which unites and holds in one all living things? I pity one who does not see in such things the living

God instantly present and profoundly interested in carrying on his biologic world.

There is one silent, subtle, palpitant pang and power of love that thrills through all organic life, that murmurs in all living things, and swells and sings its unheard song in the inmost hearts of grass, rose, or tree; of cow, tiger, or bird; of man, maid, or mother,—all straining eye and hope toward the renewed young world to come. It is this great supernatural force for which I would find a name applicable to all kinds of life and all phases of its function. In its purest and sweetest quality it is mother-love, and so in order to give it a naming we may call it that. But I would wish that the connotation may not be forgotten that it is also father-love as well, and that it is one and identical with that beautiful power which makes the pigeon turn the eggs upon which she sits, that makes the grass bloom, and the bee to seek the bloom.

Possibly some of the more "scientific" of you were a little startled when I used the word "supernatural." It has been quite the fashion among a certain class of good folk to think that anything named

scientific must not have aught to do with such foolish old used-up words. Indeed, it is supposed that science is wholly given to explaining things by the agency of physical strains and stresses, by reactions and reflexes, mechanic laws and natural selections, struggles for existence, and all that. It positively makes some people purple with rage if one dares to suggest that there may be such a thing as "vital force," or "soul," and a hint as to the possible existence of divinity, either in man or above him, elicits a pitying contempt of you that freezes the very circumambient air. Well, well! These are very wise people indeed, but the birds will sing and build nests after these brethren are gone to their agnostic heaven. Even they have their uses in a world of incongruous and changeful conditions!

Science, I take it, is, chiefest of all things, the unprejudiced, open-eyed observation and systematization of facts; the construction to be put upon them, the meaning of facts, is another matter, and differs somewhat according to the person who philosophizes. Facts are very patient, uncom-

plaining things; very pliant and compliant, at least for a time; they bear a deal of strange philosophizing over and about them, very meekly. Some people have been known to ignore them entirely, and yet the patient facts did not worry or stop existing. And those who thus falsely construe, or who thus ignore, are quite happy also. All things have their compensations, and it would be a great pity if dogmatism and atheism were denied the compensation at least of self-satisfaction.

The criticism of much that passes under the name of science, and the fault of many so-called scientists, is lack of sympathy. It is only a keen sense of love, interest, and fellow-feeling, that gives that alert use of the imagination that leads to a knowledge of the truth. The collator of facts with the light only of cold reason and intellect will never find lots of facts in the world.

It begins slowly to break, even upon the most dry-as-dust scientist, that there are some things not dreamed of in the evolution-philosophy, and the suggestion may not bring danger to the suggester that the

fight to death for the supremacy of the deer herd is not an unqualified necessity from the axioms of the "struggle for existence," nor from the "law of the reaction of the organism to the environment." If the "environment" of maidenly beauty in Juliet begets "the reaction" in Romeo's fancy of springtime love, whence it may be asked, whence Julia and her beauty? Or, to put the question in another form: Does not the stupidest intelligence catch hint from the universality, the self-sacrifice, and the power of the maternal instinct in every living organism, weed, insect, or human, that there is purpose and significance poured down into these beings from above, not growing out of them from any need or logic of present circumstance, or from any demands of their organisms, considered as single and self-sufficient mechanisms? Does the "environment," or any so-called "law," or any so-called explanation of science, show why these billions of ever renascent beings should spend every energy of their lives in producing and caring for new beings to take their places? Why should we, animals and men,

care a fig whether our places are taken or not? The sexual and maternal instinct holds masterly reign and control of the soul of every biologic thing, and gives the instant and incontrovertible lie to the libelous chatter that all is selfishness, all is mechanic, adamant law and purposeless change in our life below. Without the supernatant ocean of divine life and love behind it, the miraculous tide of maternal love could not infill and intrill the tendrils and hearts of all living things, any more than, on a thousand miles of shore without the throbbing gush of ocean-tide, would a million little bays and inlets be filled and bathed with flashing wave and liquid life. When not thus full-flooded with the tide of love, the little empty estuaries of our individual lives are occupied in panting for its future coming, in mourning that it does not come, or in pensive memories of its past blessedness.

But possibly the hard-eyed is disgustedly muttering that this is all poetry and nonsense. Give us, he is probably saying, give us something scientific, something about "nature red with tooth and claw;" about

bones; about protoplasm; dying planets; the pump-like action of the heart; and reflexes, and natural selection, and the survival of the fittest. And to the hard-eyed I might make answer that the truth of poetry is truer than the truth of science; that teeth and claws are very beautiful structures and serve glorious purposes; that bones were made by Biologos, and when dead are excellent objects of study for the hard-eyed ones; that none of us know anything about protoplasm except that it is living and mysterious; that neither of us know anything about dead planets; that natural selection is half-lie, half-truth, and that the survival of the "un-fit" is a wonderful fact.

In all seriousness, and with the most sober scientific resolution, I contend that among the philosophies and sciences of the universe, whether idealistic or materialistic, the role of maternal love is either unrecognized entirely, or held in too light estimation. The term, "struggle for existence," for example, has been much talked about, and has been supposed to be the fundamental explanation of the phe-

nomena of organic life, and with natural selection, to furnish the solution of the riddles of organic evolution. But in most prosaic literalness, can any one not see that the distinguishing and determining characteristics, both in morphology and physiology, have been more dominated by the instant and ceaseless influence of the instincts pertaining to reproduction? Can any one doubt that the progress of evolution, that the possibility and actuality of civilization have been instigated by the upworking and the outworking of the sexual passion, and the desire to find houses and food and place for the little ones? It is maternal love alone that has produced all the ideals and actualities of Beauty and Esthetics that we have; and so art, novel, drama, society, and ambition are the creations of this mysterious power.

In the plant-world every phase of form or function exists as a product of the strain toward inflorescence and seed-production. The trunks of the forest monarchs are the props of the flower to raise it high in air where the sun may reach and ripen, and where the winds may catch the pollen and

carry it to waiting mates. Every form of leaf, every shape of growth, every coloration and build of flower pertain to the one end and aim of existence. Think of the inexhaustible ingenuity, the millionfold devices for scattering seeds. Every sort of balloon conceivable has been made by the cunning mother-trees for wafting their babes to far-away nourishing resting-places. My friend, Lafcadio Hearn, tells me of the ceiba tree in the West Indies, which bursting its pod like a gun, floats its white-winged seeds like a snow-storm over a city, and when they settle, quickly must the natives clear every one off the roofs, for if a single one lodges it will wreck and crush the house with its prolific roots. The natives think the tree has personality, like animals or men, and if you wish one of the trees cut down you must make your wood-cutter drunk in order to get him to do it.

Some of these tree-mothers surround their little ones with such impervious shells that they float and drift with tides and currents for weeks and months, and yet retain their life and growth-power till

washed ashore. There are hairs, spines, and hard shells to protect; acid juices and poisons to sting and harrow; husks and hooks and spears to cut and hurt; and thousandfold devices for getting the better of the curious or the hungry. Some make hooks and claws that catch any passing animal, and who, most tormented, as all boys and dogs well know, must carry them far and wide. But the birds, too, are great helpers. Darwin found that a clump of dried mud weighing nine grains, from the leg of a partridge, and which had been kept for three years, contained seeds from which he raised eighty-two distinct plants. Especially in eating the seeds for the sake of the fruit, the seeds preserving their vitality, the birds, as also animals, are great helpers in the distribution of the flora of the world. If you think that in nest-building a swallow probably travels about 400 miles a day, and in migration (also for love's sake) birds travel straight away from 500 to 1000 miles a day, we see how great must have been the influence of birds in plant-distribution. A curious and purely accidental function of the birds is the

chance stocking of lakes and rivers above high falls with fish, which, caught below, escape from claws or bill as the birds seek their nests, and dropping into these high, remote waters, people them with their kind; the life within and about the water in such localities is often thus entirely readjusted.

But I wish to call attention to a fact, our familiarity with which leads, as usual, to a forgetfulness of its far-reaching importance and significance. There are few people, even those who know better, who do not mistake a seed's stored-up supply for the seed itself. The seed may or may not be nutritious, but even if it is so, the true seed constitutes the infinitesimal part of what we roughly call the seed. The great bulk of every grain or seed is composed of a stored-up stock of concentrated nutriment clustered about the true seed, and upon which it feeds whilst springing its rootlets downward and its leaflets upward. Thus the bread, the potato, the apple we eat, is the food that has been cunningly prepared by the mother-plant for its offspring to use whilst it is getting its own organs of food-supply ready for

their work. The yolk-sac of the fish or the egg of the bird is exactly the same sort of a contrivance.

But a remarkable deduction is to be made from all this, a deduction that is perfectly evident when we think of it and realize it, but it is a deduction that many of us seldom or never make. It is this: It is of course, self-evident, that the entire animal world, including the human, is wholly dependent upon the vegetable for food, and for the means of continuing its existence. Without the nutrient material furnished by the vegetable kingdom, the animal kingdom would at once die of starvation. But now consider well the implication of the fact, that it is entirely by means of nutriment stored up by plants to nourish *their* young, that, as it were, stolen by the animal world enables it to live. In other words, it is that great cosmic, regenerative force, biologic maternal love, that has been ingenious enough to manufacture concentrated food with the necessary "keeping" qualities, and capable of supporting the life of plants and of animals. Their food is our food; what

nourishes the vegetable children nourishes the animal children. Thus we understand, in passing, why chloroform and other drugs affect plants exactly as they affect us. Driven by the spur of solicitousness and love for its young, the plant has found out the great secret of food-formation. In this connection it is necessary to add a word as to the food of man derived from the animal. The flesh of animals is ultimately derived from grass and fruits and seeds, and this muscular tissue is thus itself the very product of the subtle, silent weaver of life we have called maternal love. The most perfect foods of man, milk and eggs, products of double distillation in the cellular alembic of maternal life, this wonderful strained white blood and living flesh,—what can we say of these works of the divine physiologic chemist? If we have grateful hearts and seeing minds, we can only thank and recognize the hand that fashioned and that reaches them to us, as the hand of God, who keeps up the repeopling of the world, and hence, who sees well to it that his little ones should be fed.

Although perhaps logically, and you will say also rhetorically out of place, I cannot forbear at this point to interject a word as to our care and treatment of hens and cows. Please do not smile at the sudden transition. When seen with the eyes of science, or with those of pure sympathy, there is nothing about living things that is not beautiful and winning and dignified. This great question of the willing obedience, loyalty, and service of the animal world to the human world, constantly arouses in sensitive hearts a multitude of painful thoughts. From every prolific grain or fruit, from dog and horse, especially from every maternal organism there run back to the divine center reins of guidance and control which ensure loyalty, obedience, and service to a common "dim, far-off, unseen event." Else why the continued giving of milk when the calf has gone, why the continuous egg-production by the nonincubating mother? Animals are not so stupid as that! Dairy-folk well know the difficulty of getting cows to "give down" when they are maltreated, when the food is not good, or when de-

prived of their calves. Livingstone speaks of the African cows as especially "bad" in this respect, and that only "milk-fever" will compel them to give their milk. The milkers in the Scottish highlands used to have peculiar songs which made their cows generous. The hen and the cow are the most loyal of man's helpers and purveyors, and yet it is grievously shocking how ungrateful we are to them. We are only beginning to learn that our self-interest commands us to care for cows better, but even now their suffering from cold, the carelessness of farmers as to their food and water, the filth in which they live, is a disgrace both to our selfishness and to our humanity. If human mothers would only think of what these other mothers endure and how they are abused, there would be some hope that the milk given human babes would soon be purer, freer from disease, and yielded by a healthier and happier animal. It is known that violent emotion poisons human milk; why also may not the beatings and abuse of the cow change her milk harmfully? Babies, human and canine, have died in convulsions soon after

nursing when the mother had just been furious with anger or emotion. It may be confidently stated that, fed, housed and treated as cows should be, and the milk cared for as it should be, there would be little enough profit to the dairyman if milk were furnished by him at twenty cents a quart. But it will probably require the scourges of tuberculosis and various diseases to teach us the little lesson that the commonest human sympathy should long ago have taught. The same thought runs out as regards our egg-supply.

Let me extend my parenthesis by a word or two of advice as to teaching children sympathy for and fellow-feeling with animals. Enlist every child's interest in domestic pets and make young naturalists of them as soon as possible. But guard against making them mere collectors of dead animals. It is living not dead biology that quickens the sensibilities and deepens the child's conception of the world. Let him learn physiology rather than anatomy, psychology rather than neurology. What is needed is the lightning-like glance of intellectualized sympathy (at least the

sympathy) flashed among the play and functions and relations of all palpitant life. Trained scientists are better museum-makers than children. Don't let the child kill and delude himself that that is science or biology. So soon as a child understands anything it can understand the pretty story of Mohammed cutting off the flaps of his coat in order not to disturb his kitten sleeping upon it. The animal child and the human child have a vast deal in common. There is nothing humanity needs more than to learn the duty of kindness and sympathy for all animal life. Have a multiplicity of domestic pets. Let children almost live in the Zoological Gardens. Beware of a person who doesn't like animals; something is deeply wrong with such a person.

Let Lubbock and Romanes wait for older heads. It is a strange family that does not think its cat and dog the most remarkable and lovable cat and dog in the world. Every pet will show animal spirit struggling toward the human, dumbly begging for human sympathy and help; and, too, there frequently occur phenomena that

make us shiver as if we should look into the sky and see great divine eyes beckoning; facts that point to the unity of all life, infallible signs of the dependence of the body upon spirit,—soul and sentiment penetrating sense and flesh like hidden electricity. The anesthetics we use in surgery paralyze plant-metabolism and action, as, *e. g.*, in the sensitive plant; and snake poison retards the germination of seeds. A friend of mine was kept awake nearly all night by some strange noise at the window. A dead cuckoo told the story of an endeavor to reach the supposed mate of the “cuckoo clock.” I went once a long distance to see a chickless hen which had driven the old cat away and was brooding over a lot of kittens, very watchful, very happy, and very proud. Mrs. Martin tells a similar story of a widower ostrich playing the role of a most excellent foster-mother to a half hundred tiny puff-balls of incubator chicks, guarding, watching, careful not to put his great feet on them, etc. A childless dog tried to steal some little puppies, but failing, took a toy dog made of rubber and tried to nurse it, licked and cod-

dled it tenderly for a long time. I have the photograph of a cat, deprived of her kittens, who is ecstaticly nursing the motherless squirrels given her to eat. An English physician describes the mother-zeal of a Maltese cat, a strict monogamist, faithful even in widowhood. But if any of the other cats had kittens she would manage to get some of them, and in a few hours she had an abundant supply of milk for them. The dependence of this milk-secretion upon pure mother-love began in this wise: At seven years of age she witnessed an accident to a little kitten just weaned, to which she had previously had a great aversion. This kitten fell, and hurting itself, cried, piteously. At once dislike disappeared; "Zettie" ran to it, caressed it, and carried it upstairs. At this time she had been a widow for fourteen months, but she now began nursing the little orphan and continued to do so for two months. I have elsewhere related an exactly similar fact, except that it was a little dog, long childless, or puppyless if you please, that nursed a lost kitten. Numerous instances are on record of men having

an ample milk-secretion and nursing babes. Wagtails use the backs of friendly stronger birds upon which they ride in long migrations. Elephants and men are the only animals that shed tears in weeping. Cows have been known to be so severely homesick that to save their lives they had to be returned to their old home. Dogs have returned home over 800 miles of unknown country; even when chloroformed it makes no difference in their return. A crow with clipped wings left his thieving new master and walked four miles through the snow to the old master. Dogs, monkeys, birds, and ducks have been known to die of a "broken heart," from loss of young, loss of their masters, etc. Ruskin tells the story of a race-horse that took sick and only got well when his pet kitten was telegraphed for and put in his stall. He then won the race! A mother monkey, the elder Kipling says, will carry with her for weeks the dried and dead body of her little one, fondling and petting it as if alive. It is said that if the male bird of Paradise is killed the female will continue to sit upon her eggs until she starves to death.

I have said that sympathy with the whole world of living things is the prime requisite of learning truth. This is true whether the truth be scientific, philosophic, or religious. It is especially so with children. The recognition of the maternal instinct in all other living things tells the young the nature of the world in which we live more than all the books and laboratories in the world. Take up the question of the growth and relative degrees of intelligence in animals. Guided by sympathy and a careful observation of facts we can show the child clearly on what biologic intelligence depends. Careful scrutiny shows that all vegetables and animals have an infinite wealth of what may be called unconscious intelligence struggling for outlet. Every living thing, in its form, color, and function, is a palimpsest; behind the later bolder writing we see dimly the deeper, richer characters and messages of a more ancient truth. The intelligent energy that constitutes the essential being of all things is the same in all, but is prevented from coming to individual expression by the peculiarities of organization

and the necessities of life. The greater, the infinitely greater part of the intelligence of our being, exists unconsciously, as cellular or physiologic intelligence. Out of this great mine of unconscious wisdom we quarry rich gems of our individual, willed, or conscious intelligence, and the progress of all personality as of all civilization consists in adopting the intelligence of the unconscious as that of our personal wills. The work of all true life and evolution is to transform cellular or physiologic wisdom and morality into conscious willed intelligence and morality.

Look carefully at the plant-world. Plants are prevented from showing individual intelligence by the fact that they have no powers of locomotion, and therefore do not need a centralized nervous system that is the agent of bringing cellular consciousness to personal consciousness. But they choose, they show emotions, likes and dislikes, and they have evident joys and sorrows. If you don't think so it is not the fault of the plant. It sees more without eyes than you do with them!

In the animal world the conditions per-

mitting the development and showing of intelligence depend upon—

1. *The sensitiveness and amplitude of sensitive surface exposed to the external world.*—This is a great and beautiful law, a key that unlocks thousands of mysteries for us. The interposition of hoofs between the feet and the ground is the most noticeable illustration. The hard hoof prevents knowledge of the ground, and the perceptions are not sharpened. All hard-footed animals are, as a rule, less intelligent than soft-footed animals. The possession of other sharpened senses may help to compensate, however. The mobile lip of the horse helps him, and the knowledge of his own body gained by the sensitive tail also aids; and also his association with man. The hog's nose and rooting propensities account for its relative intelligence over the sheep and other hard-footed brothers. The soft feet of birds are supplemented by the bill and the tongue, and especially by the wings. The mobile lips of the dog, his tongue, his expressive tail, together with his association with man have aided his soft sensitive feet to de-

velop his intelligence greatly. The same may be said of the cat. But, it is the trunk of the elephant, one of the most remarkable physiologic structures in the world, that has made this wonderful animal the most intelligent of all, except the monkey, who has learned to use his front feet as hands, and thus (the prehensile tail and mode of life aiding), of all animals he has been put in the most intimate connection with the world.

2. *The second condition of expression of animal intelligence relates to the extent of the external world thus known.*—The lowest degree, life in one element alone, will give very limited knowledge, as *e. g.*, of the earth alone, as in animals that live in the ground deprived of the light. But even here the contact of the whole body with the earth greatly enhances the possibilities of sensitiveness and recompenses the mole, for instance, for his little range of media. Fish are relatively stupid because of the single medium they know, but they have a large and sensitive surface in the fin and tail and mouth, to compensate. They have also good eyes. They have, however, no

hearing as we know it, though they have a perception of vibrations and jars.

The space, even in one medium, over which locomotion extends also conditions the intelligence. Wide-roaming, easily-moving animals are smarter than stay-at-homes. Locomotion calls for vision, and vision is the very *sine qua non* of conscious intelligence, or that under the control of the will. Some animals that move about freely when young, with eyes and other important organs, lose their eyes and senses when they attach themselves to one spot and become plant-like in habits.

Those animals which know the air alone are also handicapped. But the bat has developed such a sensitiveness of his interdigital membranes that he detects the relative density of the air near objects by this means alone, and is thus able, though blind or in the dark, to avoid objects perfectly.

Most air-livers have soft, sensitive feet, as well as the wonderful wings, so that they know two media, the air, and such solid objects as trees, the ground, etc. The greater number of these media known, the greater the intelligence, other things being

equal. So that amphibious birds, those also that swim as well as fly, are relatively nobler than those that fly alone. If they have good walking powers on land, this also helps.

3. *The development of intellect also depends on the relative development of the senses.*—Fishes are put to a disadvantage by a lack of the senses of hearing and of smell. Snakes are also without the sense of hearing, but their long, lithe, soft bodies help them to know the ground, and by a peculiar structure of the ribs and scales each scale becomes almost a foot, so that getting a hundred little leverages on inequalities, *e. g.*, of bark, some of them can crawl slowly up an almost perpendicular surface. Deer and dogs have an astounding development of the sense of smell which helps them greatly, as a hundred hunters' stories tell us.

4. *Length of life* is also a noteworthy condition of mental development. The elephant with its hundred years of life, has a great advantage in learning and remembering experiences over his less long-living

relatives. Things that live but for an hour or a day know but one instinct.

5. *Association with man* is lastly a powerful helper of intelligence. Our domestic animals imitate and learn of us with avidity. Some dogs have learned to understand ordinary conversation. Chickens are slow in this respect, because their feet are hard, they have lost the power of flying, etc.

Thus, what an understanding of the world we get by sympathetic observation of life! Universal cellular intelligence is aided in becoming specifically manifest, or in becoming the instrument of the individual will, by the sensitiveness and amplitude of the bodily exposure to contact with the world thus sensed; by the relative development of other senses; by length of life; and by association with man.

6. *But it is especially the strength and exercise of the maternal instinct*, which besides governing the unconscious development, and being one of the most fundamental of the conditions of intelligence, is specifically a powerful factor in the pro-

duction of the intelligence of the genus and of the individual. One of the stupidest of animals, whose feet are hard, whose lips and tail are in this respect useless, the sheep, may be spurred to ingenuity by love, as by no other thing. A patient told me of a mother sheep which had no milk for her little one. It only needed one experience to teach her when her lamb bleated with hunger, to run with the little one headlong to the house, a long distance away, where it was fed "by hand" by the kind-hearted human sisters. Tropical cats know all about artificial respiration. A friend saw a cat take its drowned kitten and roll it up a hill, the fore-paws alternately squeezing the lungs at every step; in about half an hour of almost frenzied labor the kitten was resuscitated.

Literature is filled with the devices and marvelous proofs of ingenuity of animal parents in raising and defending their young. The feigning of death of opossums, snakes, and birds; the simulation of wounds, the trailing of wings, the building of nest over nest by the summer yellow bird to prevent the incubation of the egg of the

shameless cuckoo, the hiding of snakes under the mother's coils or down her throat, the thousand protective devices and ingenuities—all show how strong a force is maternal love in the development of the intelligence. Opossums leave the marsupial pouch early, and clinging to the mother learn many things of the world very early. Nicols tells a comical story of a young kaola which was taken by a cat to nurse with her own kittens. But the kaola had inherited the habit of riding about on its mother's back, a habit that the pussy foster-mother didn't like at all. But she was very patient about it all. A writer in *Science*, some time ago, tells of the curiosity of a monkey, which in hunting other game on an opossum in his cage, discovered the wonderful pouch full of opossum babies, and examined them with tenderness but profound curiosity. Nicols tells of the laughable attempt of a little kangaroo to find the pouch of its dog foster-mother.

It is frightful to think of the evil that results from the dissociation and alienation of humanity from animals, or, what is

worse, from the nasty habit of considering them as soulless slaves to be used, or as targets to be shot at. When I see some savage human female riding about the streets behind horses whose necks are suffering from infernal check-reins, and whose eyes are rubbed sore by stupid blinders, driven by a fool who knows nothing of horse-character, I feel very much like wishing to pull that creature out of her cushions, cut off her hair, stick a bit in her mouth, and yank her head back in the same way as she has done with her horses. What else but having been brought up with animals and thus learning how lovable they are, will ever eradicate out of fiendish humans the idea that when they have an hour or a day to spare from their work of plundering their fellow-men they must spend it in murdering some animal. "Let's go out and kill something!" That is sport! And, of course, woman will never permit men to be worse than she can be, and so goes on the insane and awful destruction of our birds, of beautiful winged life all over the globe. Beware of a woman with a bird on her hat!

What genuine and delightful happiness these little beings give us! I shall always look back to the days when my dog and I played hide-and-seek in the woods for hours together, and I regret nothing more than the fact that I was unjust or harsh to him once or twice. Knowledge and sympathetic study of animals teaches one more and truer psychology than all the books can do, because in their artlessness they show the secret springs of motive, and of evolution, and form a mirror wherein one may see himself reflected.

Just one glimpse of the "one touch of nature which makes the whole world kin." Does this anecdote by Kipling Sr., not recall the relations of some human couples we have known?

"One morning there came a monkey chieftain, weak and limping, having evidently been worsted in a severe fight with another of his own kind. One hand hung powerless, his face and eyes bore terrible traces of battle, and he hripled slowly along with a pathetic air of suffering, supporting himself on the shoulder of a female, a wife, the only member of his clan who had remained faithful to him after his defeat. We threw them

bread and raisins, and the wounded warrior carefully stowed the greater part away in his cheek-pouch. The faithful wife, seeing her opportunity, sprang on him, holding fast his one sound hand, and opening his mouth she deftly scooped out the store of raisins; then she sat and ate them very calmly at a safe distance, while he mowed and chattered in impotent rage. He knew that without her help he could not reach home, and was fain to wait with what patience he might till the raisins were finished. It was a sad sight, but, like more sad sights, touched with the light of comedy. This was probably her first chance of disobedience or of self-assertion in her whole life, and I am afraid she thoroughly enjoyed it. Then she led him away, possibly to teach him more salutary lessons of this modern and 'advanced' sort, so that at the last he would go to another life with a meek and chastened soul."

We have seen that the absolute condition of the existence of the human and animal world depends instantly and continuously upon the secret of the fabrication and storing of food about her seed-children, by the Chemist-Mother of the plant-world. The existence of the living world depends then upon mother-love and upon

mother-foresight for food, the primal condition of life-perpetuation.

But not only for food, but for the feeding itself. The lambent flame of limpid love that burns in the startled wondrous mother-eye of cow, or dog, or human mother, as she gazes down upon her little nursling, is perhaps the most revelatory thing in the world. All the world loves a mother, and all mothers, human or animal, are sisters. A common passion links and unifies them all and makes them alike holy, all commissioned by another mother-heart to be sharers in a divine duty. Step into a pigeon loft. There is one bird which a few hours ago was liberated 250 miles out at sea. He was taken there in a closed basket. He knew nothing of compasses, of astronomy, or of steamers and oceans, but when the basket-cover was raised, by the guidance of an "instinct" the nature or mechanism of which we know utterly nothing, he darted toward home, toward the place of his duties as monogamous husband and as caretaker of the young. Without indecision or varying he came straight to his home over hundreds of miles of wa-

ter, where no landmarks existed. At once he begins his domestic duty of driving and tormenting his wife toward the nest. The imperious fellow will brook no shilly-shallying. Eggs must be laid—*Voilà tout!* When there are enough of them they must be hatched, which on occasion he will help to do, turning the eggs regularly, bringing the outside ones toward the center, etc., so that all the children shall be born together. When the young are there he has an abundance of “soft food” macerated, in his crop, a kind of bird-milk, ready to feed them until their digestive powers are ready for common food. The mother may now go about her business of getting ready for more eggs, and the mother-father attends to the babies, teaching them by and by where to go for food, etc., etc. Who taught the mother to *stand* over the already laid eggs instead of sitting on them, before the time of incubation of the whole lot should begin? Who formed each wondrous egg with such provisions that the “white” or food of the young unhatched chick should surround the yolk, and again the yolk about the germinal vesicle, and about all the en-

casing, protecting shell, with pores or breathing spaces through it for the chick's supply of air?

“The section of an egg proceeding from the outside to the center, shows, first, an outer layer of calcareous matter containing the coloring pigment, then the inner layer, both being penetrated by minute canals for the admission of air when the shell is dry. Next within lies the shell membrane, which is separated at the larger end of the egg into a double layer, and includes a small air-space, which increases in size as the egg grows stale and becomes unfit for incubation. Immediately in contact with the shell membrane is the albumen, a white viscous fluid, and again within that the vitellus, or yolk, containing the germ enclosed in its own membrane, and *lighter* than the albumen. The difference in specific gravity between the yolk and white is made, by a singular contrivance, to promote the development of the germ most effectually. From each side of the yolk in the direction of the long axis of the egg, proceeds a cord of condensed albumen extending towards, but not meeting, the end of the egg, and vulgarly called ‘the tread,’ under the erroneous impression that it represents the influence of the male. Between those cords,—one passing toward the large and the other toward the small end of the egg—the yolk is, as

it were, slung in the albumen. Thus while the germinal vesicle on the outside of the yolk is prevented from coming into actual contact with the interior of the shell by its 'moorings' in the denser substance of the albumen, the lightness of the yolk determines it to float toward the surface, and the cords allow it to go just so far as is sufficient to keep the germ spot always nearer the upper side of the egg, whichever way it may be turned on its axis. Consequently, that part of the yolk where the most vital part is situated remains, in all circumstances, nearest the source of heat, the mother's body."

Let me also sketch for you the cares of another mother. This mother, though a vertebrate, has had to develop the hind legs and arches of the pelvic bones in such a way that the young must be born very early, so early indeed that there is no placental connection with the mother, no blood-feeding of the kangaroo baby before its birth. When born, indeed, it is merely an egg, without a shell, an inch long, a helpless bit of fragile protoplasm. Only a kangaroo mother could care for such a baby. This she does by sticking it in a wonderful pouch of skin beneath her body,

and how this is done, and how the nipple is got into the mouth and clear down the throat into the stomach of the unformed, muscleless, motionless bundle, are mysteries of kangaroo motherhood. What is still more wonderful is, however, understood. Without formed muscles there can be no suckling, but nature is, as always, equal to the emergency. The muscles are in the mother's breasts, and she can extrude the milk at will. Another bit of "special design" is required by the fact that as the kangaroo babies grow (the mother moving by jumps, as all know) their weight would burst the marsupial pouch if it were not braced and supported by the marsupial bone which grows out beneath it, and is thought to be ossified tendons of the external oblique muscles. The enormous brontosaurus has two such huge bones beneath the pelvic cavity.

The pursuit of food for mate and little ones is, as we have seen, a more subtle but active cause of mental growth. The swifts in building their nests out of inspissated mucus from the large salivary glands, thus transform a weight of material much

greater than that of their own body into this gelatinous substance. This drain on the system is so great that if the nest is stolen the second one is not, as was the first, white and pure, free from foreign substances, but is made up largely of feathers, hair, etc. Gould took from the lining of the nest of a long-tailed titmouse some 2000 feathers. The body of the nest was made up of lichen, moss, hair, etc. The weight of the eggs of one sitting is much more than that of the mother's body, and this expenditure of energy in nest-building and egg-bearing is in all birds relatively enormous. Doubtless to feed the nurslings a bird ordinarily flies from 300 to 500 miles a day—with how many wing-strokes to the mile? To illustrate the coöperation of the purely physiologic or unconscious processes of the body with the bird's willed or unconscious work, it may be noted that during incubation the temperature of the mother's body rises several degrees. God helps mothers! In this connection also it may be noted that the hornbill feeds his wife and young ones (whom he has securely walled in their

nest) through a little hole, with the prepared and regurgitated food, in a bag or pellicle, derived of course from the lining membrane of his own stomach.

The genesial instinct is more plainly the origin of educational ingenuity in birds than in other animals. No two species of birds build nests exactly alike, and the mechanic and artistic ability in some is astonishing. That mother-love in birds begins and carries on the education and elevation of mentality there can be no doubt. It is certainly at the bottom of that astounding fact, bird-migration, a phenomenon of wonderful significance in the distribution of the flora, and even of the fauna of the whole world.

But the same dominant desire also, I judge, governs the entire habits, distribution, and character of all animals. To find a lair or place of safety for mother and young, and to secure food for those at home, must dictate the place of living, and thus, finally, the type morphologically and psychologically of every species of animals. The ability to elude enemies by a thousand devices must form mental habits

according to the peculiarities and the length of time of those habits. Volumes might be and have been written describing the myriad means of securing safety and food, and for starting the youngsters in life so that they shall be able to do the same thing again. Pigeons leave the nuts abundant in a thousand trees where they are raising their young, and fly hundreds of miles to get their food, so that when hatched the weak-winged youngsters shall have food in plenty where they are. To illustrate this fact let me describe one thing I have not seen in print, and which shows the instant and incessant government by the reproductive instinct: A patient from Mexico tells me he has about 1000 brood mares on his ranch. Each stallion defends and commands from 15 to 30 mares, according to his fighting ability. He keeps his family always distinct from every other and this segregation is so rigid that when the whole thousand are "rounded up" and driven pell-mell into a corral, it takes the stallions perhaps hours of intense running, neighing, whinnying, fighting, and hunting, before each has his

flock separated by winding but clearly-defined alley-like spaces between each group. Then the men may enter! When running loose, if one group comes near another, one leader may try to drive or woo a mare of another family, at once resulting in a pitched battle between the two leaders. The fighting is done largely on the hind feet, the fore legs little used, the aim being to seize the other's neck with the mouth. If one gets a good "hold" in this way the result of the battle and the possession of the object of battle is soon settled. The period of gestation of the horse is eleven months. My informant knows that it several times occurred in one family that colts born nine or ten months *after* a mare had been placed in the family were at once kicked to death by the jealously-wise head of the family, who had not been consulted in regard to the matter.

A number of amphibious animals have the trick of living long beneath the water, and of keeping the submerged body entirely out of sight while exposing the tips of the nostrils to breathe. To find a home and security for his family the beaver has

developed a marvelous degree of reason and architectural genius that has long been the admiration of man, and is superior to that of the bee. The platypus burrows in the bank of a stream, one tunnel entering below the surface of the water, another above it, and both leading to the nest. Thus he can use either and escape all observant enemies.

It seems at present impossible to estimate the due proportion of influence this necessity of nest-making, cave-homing, and lair-devising, all for the young, has had in developing ingenuity and mentality in animals, but I cannot doubt it has been the preponderating influence, direct and indirect, in spurring *one* species of animal into the human. Archeology and anthropology teem with hints and proofs of this fact. Home-making lies at the basis of all progress out of animality into humanity, and of all advances out of savagery into civilization. And is it not plain that the family relation is the direct product and machinery of maternal love in its large sense? Every element of the most complex civilization springs from or is vitally related

with the home-making industry. Mere food, until a high degree of civilization is reached, is perishable almost in an hour, and therefore is the object of the hour's need; but possession of *one* place of meeting, or of seclusion, begets the fact of ownership. Tools, investments, houses, all things manufactured or durable, become possessions, and hence arises the conception of property, and the entire legal aspect of human relationship is thus seen to spring out of the family relation and flows inevitably from that relation.

One of the most sympathetic and open-eyed observers of animal life, Hudson, says that most all wild animals have their games, dances, plays, or amusements, and especially all birds. What an influence love exercises in the formation of plumage, coloration, forms and habits, of all animals is now known of all biologists, indeed, of all intelligent people. Certain it is, therefore, that most all beauty in the animal world (and of course in the world of flowers it is wholly true) springs from some phase of maternal love. An oriental proverb says that "even the young of the

ass is beautiful!" Childhood, either of plant, of animal, or of man, is the one superlative exhibition of beauty. A glimpse, a perfume, a flashing and gleaming of something superhumanly, supernaturally beautiful, lingers long and caressingly about all young things. The greatest picture, the ever-painted model, the never-realized ideal of art-excellence, is the mother and her child. Whatever power for good or evil from Troy-times to present-times womanly beauty and charm has had in human life,—surely the whole of it can be credited or debited to but one thing. Art, whether in poesy, drama, novel, sculpture, or painting, is simply myriad-phased love. Back through all forms of life, clear to the protozoa, the beautiful is linked with the maternal in indissoluble unity. Estheticism, art, all the charms and delights, are the rewards and benedictions of the divine Father and His pleasure in the renewal of living forms.

Now, exactly the same truth applies to morality, or the emotion of altruism! In all family life when the sexual or family relation is not in action, there is selfish-

ness, utter indifference, or positive enmity always manifest. The principles of individuation, the struggle for existence, the preservation of self, called the first law of life (but wrongly so-called), have unlimited and absolutely exclusive sway over all beings and functions, except when love and the care of the young come in to contradict and overrule them. Maternal love is the miracle of all biologic existence. It cannot be conceived as arising by any action of "environment" or from the necessities of the organism standing nakedly there. Into every life, nay, into every fiber, bone, and cell of every living thing, the great God, Love, stoops down and permeates, nay, He clutches and masters each for a purpose beyond and after. From the standpoint of present-day science, from the standpoint of determinism, fate or chance, from the standpoint of the agnostic, or of his twin-brother, the atheist, this maternal-paternal love, this all-powerful, all-forming, and all-transforming energy is the most illogical, most uncaused, most utterly unaccountable thing conceivable. We can explain all things else in

some half-blundering, half-satisfactory way, but for this exotic wonder there is no scientific accounting that would not make a mummy laugh. It is, it comes to us from without, and that is all we can say. It is the one patent, convincing, unanswerable proof of the divine, or the supernatural, entering and grasping the organic mechanism for ends beyond that organism itself. And its first, last, continuous, and increasing effect is to make every organism value and cherish a being that is not self. It is therefore the very basis and essence of all that is ethical and religious. Every animal is put in training by it for humanization, and becomes through it a faultless illustration for us of the supernaturalism and the glory of ethics of other-love. To the childless a hundred animal stories teach that there are orphans we could make our own children. Alas! The heart-broken sadness, the pathos beyond tears of the motherless. Read Kipling's *Baa, Baa, Black Sheep*, and then think of what is going on in the breasts of thousands of children in the

“barrack-schools” of England, and in the orphan asylums of America.

The limits within which the role of the maternal instinct is confined are more rigid in the animal world than in the human. I doubt if anyone knows anything about the old bachelors and old maids there. Of course, there are but few such, but these few must occupy strange positions in life. After the productive age has passed, one wonders if wild animals keep up the relics of family life. Probably not, I fear. At least, one species of birds, the cuckoos, are sharp little scoundrels. They build no nests, and carrying their eggs in their mouths, slip them into the nests of other birds, where they are hatched some days in advance of the eggs of the rightful owners. Then with characteristic inhumanity, or unbirdity, they proceed to gobble up all the food and kick out of the nest the rightful children. Male birds often arrive in migration from their thousands of miles of flight before their mates, but the same mates do come, and they come year after year to the same locality and rebuild

their nests in the same neighborhood or spot. This home-attachment has numerous illustrations. A water-wagtail once built her nest on the framework beneath a railway passenger car, which later was put into local service, running four times a day between Cosham and Havant, in England, in all about forty miles. At this time there were four young birds in the nest, and the little father, while his family were away, promenaded the turntable, etc., awaiting the shunting of the car bringing back his wife and babies. A pair of tomtits for three years built their nest in a letter box. All the letters posted fell upon the sitting bird, and the splendid postman carefully gathered the letters and left the birdies.

Among animals the limits of the control of the maternal feeling are rigidly confined to simple necessity. Love seems to disappear as soon as the young can possibly fly and get their food—another proof of its supernatural quality and origin. I have often wondered, too, at the general indifference of the father to the young. In many, perhaps most animals, the father seems to care no more for his children

than if they were moving bushes. Certainly, he cares no more for his own than for those of another, and the idea of any love toward grandchildren is absurd. Not even the mother shows this.

But it is of the greatest interest to note that with the appearance of humanity and with its ideas of home and of property (both products of maternal love) there arises a natural extension of the scope and control of the family instinct, and the interest of the parents continues into or through adult life. Support and protection of the mother continues beyond the child-bearing period, grandchildren are beloved (sometimes I have noticed, even more than the children themselves were), more distant relatives are held within the family affection, and the patriarchal type of society is established. When the higher ideals of society and civilization are permitted to arise, the egis of love is extended over the nation, and patriotism with its great influence in war and history appears. Finally, the highest development of humanity arises, and, still an actual outgrowth and extension of maternal love,

ethics and love of humanity, and of the divine Father-Mother of humanity, and of all life, takes possession of the loyal being, whether he be social reformer, philosopher, pietist, or religionist.

I fear that I have wearied you: Let me then epitomize the principles about which I have gathered my much-wandering and perhaps incoherent thoughts:—

1. Among the factors of evolution there is one of which scientists have made too little or no account. This comprises the entire grouping as one, of all the instincts variously denominated genesic, sexual, or reproductive, the whole series of the various functions, necessities, and results, going to the begetting, gestation, nourishment, and training of the young. Conceived thus in its entirety we may, for want of a better name, denominate it maternal love.

2. In the vegetable this energy largely and entirely dictates the morphology and physiology of all types and species of plants, and is the sole factor in their flowering, seed-forming, and in the phenomenon of growth.

3. The stored food, fashioned by the cunning and secret chemistry of the plant, and provided by maternal love for the first nourishment of its young in the seed, is the ultimate source of nourishment of the entire animal world, humanity, of course, included.

4. In the animal world the maternal sentiment more largely than any other or all other causes, leads directly or indirectly to the development of ingenuity, nest-building, and other forms of home-making, and hence to mental evolution and progress to higher types.

5. It is doubtless in this special way the prepotent factor in the humanization of the one genus or species of animal from which we have sprung.

6. In the human race it has been the dominant influence in the formation and progressive growth of society through its effects in the creation of property and private rights, and in the founding of homes, of families, etc.

7. In both the animal and the human race it has been almost the sole source of the appreciation, ideals, and facts of

esthetics, all forms of art drawing their inspiration and data primarily or at second hand from its exhibition and function.

8. Religion and the belief in the supernatural apart, there is not, so far as we can see, any other cause that has been in the least operative in producing, throughout all biologic history, any ethical or altruistic fact or function whatsoever. To this great instinct is entirely due all the practices operative in plant or animal for the welfare of any other than self. And in the highest society of to-day every ethical act derives, directly or indirectly, from it.

9. Almost all other evolutionary factors may be more or less satisfactorily accounted for on theories of "natural" causes, such as "natural selection," the persistence and correlation of energy, the "sensitiveness of protoplasm," etc., etc., but viewed in its singleness or in its entirety, this instinct, so far as our intelligence can judge, is plainly uncaused and inexplicable, and, to put it boldly, is a miracle, thrust among all other natural

forces, and dominating all for its half-hidden, half-revealed purposes.

May I relate a dream?

I thought that maternal love and all pertaining thereto ceased appearing in our world because mankind did not appreciate the beautiful and gratuitous gift, and were so ungrateful, even abusive of it, that God grew tired thrusting it upon us. Men and women had grown so callous that they took upon themselves the awful duties of parenthood, and then neglected their children. They made orphans by thousands and then left them to be cared for in horrible asylums, their tender, unpracticed, unguided longings bruised, or like cellar-plants, left groping for hidden light. They ruthlessly killed and destroyed all things for selfishness and amusement.

And so, in my dream, all that related to maternal love silently ceased to be, and I wandered among strange-seeming people and profoundly changed scenes. The whole animal world became other; ornament, color, gay feather and lightsome

song gave place to sad makeshifts of utilitarian hair, bristles, splotches, screeches, and grunts. Even in the eyes and faces of my best friends everything became different, hopelessly pitying or inhumanly hard; deep-seated selfishness gleamed upon one everywhere from snake-like eyes. Smiles one never met, but an occasional *risus diaboli*; cacchinations of derision or ridicule were heard, for men and all things were painfully grotesque and altered in appearance. Men jeered at each other because all beards had disappeared; the glory of woman's hair had also gone. Worse than this, the beauty faded out of woman's form and feature, and instead of the divine charm of laughing eyes and radiant winsomeness, they all became half or wholly repulsive, coarse, much like men, and yet without the dignity or strength of men. The men had likewise become womanish without becoming in the least degree womanly. The beautiful, except perhaps the flash of the moon on wave or sun on mountain-top, had gone out of the world.

No children were born, and those that existed were thrust out to die or live neg-

lected, or were fed out of illogic pity. There was not a flower in the world. Almost all human social gatherings ceased; why should people meet together now, when they had no pleasure in each other, and when each looked on the other thinking only how his money could be taken away from him? Men left their homes and were never heard of again, and in all places strangers, uncouth, ill-clothed, brutal, and cruel, came and went in objectless ebb and flow. Who had wealth turned it into gold or portable goods. All commercial credit ceased; banks closed their doors; every one barricaded his house, and went about "armed to the teeth." The iron-mills and rolling-mills went on, and many manufactories, but everywhere was harshness, and grind, and ugliness. Despair and idiocy, and crime and insanity instantly increased a hundred-fold. An awful shudder, a cosmic horror crept like cold snakes through the arteries; the blood curdled in all hearts. Women whispered to men an awful message, and men moaned it to each other; hungry-eyed dogs divined it in their masters' eyes; it ran like doom along the

branches of the leafless trees, down to the roots, and there every mole and insect was frozen with terror of it. *God is dead!*—were the agonizing words that palsied thought and emotion, and that clutched at the life-springs of every bosom.

Slowly the prices of everything commenced rising and famine began. It was found during the second year that the stock of grain was nearly or quite exhausted. Seed sowed in the ground came up, but there was no new seed formed. The cattle had died off in great numbers during the first and second winters because the owners kept the little corn that was left to still their own personal hunger. No calves or lambs were born, no chickens hatched, and the older animals could not get enough grass, leaves, or roots during the summer to carry them into the next winter, the third, when death would surely come. But they were not allowed to live that long; and during this second year every animal all over the world and of whatsoever kind that could be reached by the ingenuity of man's hunger had been sacrificed. Then began universal famine,

cannibalism, and unutterable horror. Everywhere was death, and death was everywhere. Within two years from the death of love there was naught but death. Rocks and sand and waters there were, a desert-world just like that before the angel of maternal love came among the rocks and sands and waters, and made out of them the world we know, the world of grain and fruit, the world of sweet, cool grass, the world of rustling leaves, the world of beautiful, wonderful animal forms, the world of friends, the world of baby-faces,—the world of God!

CHAPTER IV.

IMMORTALITY

IF you sit down in the quiet of your own room and calmly ask yourself what it is in reference to a life after death that you really desire and what you may reasonably expect, you will probably be surprised to find what a blank your mind is upon the subject. I doubt if you will find that you inwardly desire it, in the same manner, for example, that you desire wealth, or fame, or beauty. You have grown up in the belief that it is right to desire and believe, but that, you know, is quite a different affair from actual yearning.

Nearly every one puts the thought aside as beyond solution. One says, "My thinking will not change the fact nor my longing bring it about. The duty of the passing day is all I can fulfill." Under this cover of postponed examination the world

has grown as indifferent to the question as it was formerly engrossed by it. Fear of offending delicate sensibilities and established beliefs keeps the doubter and modifier silent; whilst the extreme of the omnivorous believer is set over against the out-and-out denier. But the great majority of people are neither believers nor disbelievers, but indifferentists—slowly settling toward an agnostic non-committalism that is destructive of all intellectual and moral earnestness.

It is my conviction that this abrogation of curiosity and examination is a most culpable and dangerous fact. If we live after death it is of tremendous importance; if we do not it is of no less vital import, and the belief, the disbelief, or the evasion is of the most constant influence, unconsciously, subtly, upon every thought and act of every day's living.

Suppose now we divest ourselves of the creeps and shudders usually accompanying a discussion of death and immortality, and fearlessly test the common dogma with a little analysis in the light of scientific research and reason. Let us suppose you

are a believer: what is it you believe? You desire: what is it you desire, and how far is your desire feasible? You are convinced: but what is the truth? If possible, in what way and to what extent is a future life possible? If attainable, by whom or by what means? Moreover, the kind of belief makes all the difference in the world. I have read somewhere about an African chief who killed his wife's lover, and was defeated at last by his wife's unswerving belief in immortality, she committing suicide in order to join her lover. But the chief was equal to the emergency and he in turn killed himself in order to follow the pair and break up their tête-à-têtes in the other world! It all depends upon what you propose doing with a future life after you get it. You might just as well be digging clams on this earth as "singing Hosannas around the throne" in heaven.

Do you believe in or fervently desire what, with splendid bravery and *abandon* the old creed called "the resurrection of the body"? Terrible counter-queries arise. At what age in your life would you

choose as best representing the ideal body for your resurrection? Would you prefer your body as it was when you were a child, when youthful, when mature, or when old? Moreover, it is changing every minute, this body. It is estimated that something like five million blood-corpuscles die every second of your life. Even the two or three pounds of minerals in one's bones are only a little more permanently fixed. All component parts are undergoing change every instant: they soon become grass, grain, or tree, passing again into others' bodies, and so on forever. Is it the form and feature you desire to preserve and not the constituent particles? But form and feature change every day or year, and are as impossible to fix as the atoms themselves. Indeed, is not the whole matter put beyond choice by the evident fact that unless by the fiat of an extramundane deity the only moment possible to fix the bodily form in the mould of eternity would be the death-moment? And yet this were the most undesirable of all seasons, since at that hour the body is in the weakest, most useless, and most wretched condition of all the

hours it has served us. Supposing therefore, that you are so in love with your own body that you would wish to call it into life again and for forever, we see at once that no moment or phase of development could be chosen, except perhaps the dying moment, the least desirable of all, and that the particles of one's body have served their turn in myriad other bodies each having an equally valid claim to his "property." Besides this the absurdity of the whole is emphasized by the crushing fact that all the organic matter of the world has been used over and over for bodies and the earth has not enough hydrocarbons to fit out again with bodies a small fraction of the souls that have lived upon it. Doubtless the combined weight of all the organic bodies that have lived on the earth would be many times the total weight of the globe including its minerals, elements, and gases. It may be frankly admitted that no bodily resurrection is possible.

And it is as certainly undesirable. The old dogma was the crudest materialism, wholly unworthy of the credence of those who pretended to believe that God is a

spirit, and that they are his children. The belief in bodily resurrection was a natural concomitant of the age of sensualism before the mind and spirit had risen to their modern heritage. The desire for such a resurrection stamps the person with a self-confessed imperfection of mental and moral development. The impossibility of such a resurrection is one of many proofs that life is no sensualist at heart and that ideality is the final outcome, the trend of actuality. Nature compels us to take wings though the sluggish Psyche lingers lovingly in the pretty little cocoon of materiality she has built about herself.

Is it perhaps your understanding, reason, or intellect that you desire to perpetuate forever? Frankly, now, are you so in love with your mental outfit? In your more modest and sane hours are you not sadly conscious how very imperfect it is? While we are young and very conceited we may be filled with self-satisfaction and trust in our own judgment, but as the years drag by, we, looking back over the past, grow more and more conscious that our intellect is not to be trusted. Think of the intermin-

able series of blunders of which your life is the record! How poorly you have misjudged people and circumstances! How your reason has fooled you many times and again! How many illusions and delusions you have lived through! With what sad clearness you now see your former stupidities, and with what blindness you fail to see your present ones! Looking about you, you find others equally as gifted as yourself holding your opinions as loathsome. Looking above you, you see the most intellectual and the most educated diametrically opposed in their opinions of God, man, and nature. Two great men, two brothers learned and trained in dialectic and logic, soon grow apart. One becomes a cardinal of the Romish church, accepting papal infallibility and a thousand such absurdities, the other as firmly convinced that the fallacies of the English church are God's gospel. Looking below you, you see the great mass of men wrecking their minds and lives upon a thousand outrageous beliefs and prejudices. There is no sadder spectacle in the world than this that the people love error. But each

one with imperturbable conceit is convinced that he sees better and plainer than another. Every partisan democrat or republican has no sort of doubt that he is right about every financial or governmental measure, though he has never studied finance, history, or political economy five minutes. He does not dream that he is a dupe of low-lived politicians and of his own *lack* of intellect. All history is a tangle of such poverty-stricken intellection. One can but be amazed at the proneness of everybody to see things and do things every way but the right way. And this is the kind of a mental equipment you would stamp with the seal of eternity!

Possibly you may protest that it is a more perfect and purified intellect that you wish. Ah, yes, but that would not be your intellect. You want to be made over, made in another person. That would not be your immortality but that of another. That would imply that it is pure intellect and perfect, in the abstract, that you are interested in. Have you shown much interest in that sort of intellect in the past? If you wish such an immortality of a per-

fectured intellect you must certainly possess it before it can be made everlasting.

Perhaps, again, you will say that it is the ever-progressive ever-growing intellect you desire. This is subterfuge. That is not what you wish but what you would take in default of your first choice. Lessing said that if God held out to him absolute truth in one hand and in the other the everlasting search for truth he would choose the latter. But the condition of everlasting search would be the condition of everlasting imperfection of intellect. Lessing's choice seems to me impious.

I therefore conclude, that at heart you do not wish to eternalize your crude imperfect intellect, and that the sole method of getting an exalted and perfected intellect is to cultivate it here and now. Have you in the past obeyed reason and not passion or self-interest? Have you studied logic, history, and science with a sincere desire to do your political and social duty, and to free yourself from prejudice, error, superstition, and conceit? If not why should God suddenly endow you with a perfect intellect ready-made? Is it God's

way in this world, to give excellencies unasked and unearned? Rest assured he will not do it at your dying hour. It is no particular merit in you to die; why should you be rewarded with a new intellect then?

Or, again, you may say that it is not so much your intellect that you wish to make immortal as it is your emotional nature, affection, etc. Love and friendship, you complain, are cut off by death and the tendrils of the heart die because they find nothing to cling to or rest upon. You would like to renew beyond the grave the love and sympathy that has made the earth-life endurable, and even beautiful. Now is this, in very truth, just so? Are you really satisfied with your devotion and love? Have not your outgoings of the heart been quite fickle, illogical, selfish, and calculating? Has not your love and gratitude been often a lively sense of benefits to come? Has your love to woman not been of the "Krentzer-Sonata" type, a little better and more subtly-concealed perhaps, but at heart the same? If you are a woman have you been seeking to get or to give love, and has your little affection

been but payment for protection and a home? Have you chosen true and noble friends and been true and noble to them? Has your charity been but alms-giving without kind sympathy and helpfulness? Have you as married folk, perhaps, been, as the cant phrase has it, "devoted to each other," but oblivious of the duty of affection toward the rest of the world,—grinning examples of *l'égoïsme à deux*? Is your family a fetich, an enlarged sort of selfishness? Do you at heart care much for anybody except your own precious self? And a too exclusive love, even of the purest type, may be sin in God's eyes. If you bind all your affection upon one weak life you risk a precious value upon too single and narrow an object, and deprive others of the sympathy that need it more. "Just wrapt up in one," as the sentimental jargon has it, is often if not always a pleasant way of great sin. Affection may become morbid—a disease, quite as well as any abuse or exaggeration of any other characteristic.

I take it that they who are the most satisfied with the strength, purity, and

constancy of their love and emotional nature are precisely they that have neither actual strength, purity, and constancy of sentiment, and are thus accurately they that should not have immortality.

Lastly, if neither body, intellect, nor the affectional nature are such as you wish made eternal, are you any better contented with your moral nature? The question at once raises a smile. The feeling of our own ethical unworthiness has crystallised into the great Christian dogma of Christ's vicarious sacrifice. In the words of the old hymn, "Jesus died and paid it all, all the debt I owe." No man hoped to get to heaven on his own merits. Much of the zeal of religion has consisted in the joy of the belief that by a sleight-of-hand trick, a big sponge of forgiveness was wiped over the ethical debit and credit account by the lachrymose deity, whose occupation, as Heine said, was to forgive. History is one long monotonous list of man's sins and inhumanities. I think it probable that you will not urge the ethical aspect; I would leave that plea aside. We all know that we are very much like a lot of pigs, each

after the most and best corn and the warmest bed. The amazing immorality of trying to get to heaven on another's merits was the most brazen example of how little heavenliness there was in the heaven-hunters and heaven-scalers. Of course the desire for heaven itself, the desire for one's happiness was immoral when conditioned upon the misery of others. Nature in this respect is better than man, denying him his childish materialistic desires and forcing him to wait for immortality until he can learn to live in the spirit and seek no selfish heaven.

Just as the body is ever changing, and it is impossible to seize upon any hour when we could eternalize it, except at the undesirable death-hour, so it is the same in reference to intellect, love, and morality. There are no two days in life when we are the same. As to intellect we have little before adult life is reached, and most people have little after fifty or sixty years. It is proverbial that few change their opinions after that age, but subsist on old prejudices and ideas. The mental powers get into ruts and habits, true reason being

abrogated. As to love we laugh at our fickleness, and our habits and ideals of friendship get sordid as each year strips off the freedom and expansiveness of youth and the dear cold ghost of self is more exclusively worshipped. And our ethical standards change with each day's passing. We have at every hour to clutch ourselves by the throat and cry, "Stay! Who art thou?" And lo! while we ask our protean self the question, we have become another. We seek perpetuity of existence for something ever becoming other. We seek personal identity after death, but we have no personal identity before death: how then can we have it afterward? Do you not see that what makes you recognizable, different from other individuals, and what would make personal immortality possible depends upon the accidents of organization,—depends firstly upon the bodily peculiarity, and secondly upon imperfections of mind that you do not wish to perpetuate? Twins sometimes wear a knot of ribbon as a signal whereby their friends may recognize them. Our faces and bodies are but such little symbols or signals that our

souls have hung out for the day. Divest your best friend of his body and would you recognize him? Have you ever thought how the photograph of your friend's soul would look? If bodily form and imperfections make up the most of what we call individuality it becomes evident that in casting off imperfection we become less narrow, less individual. As you become freed from the cramping littleness of self-love and the bonds of self-gratification, as you rise into the life of the spirit, you find yourself less individual. One fitted for a true heaven would not care for the old immortality. What is good to carry over into the future life is not so much personal identity as personal non-identity, not so much the imperfections that make us individuals as the perfections that free us from individualism. We must lose our life to find it. We have overestimated the value of individuality. Self-consciousness has become hypertrophied, and the *summum bonum* of life is held to be the preservation of a little puckered-up individuality. This over-development of individualism is doubtless due to the fierce struggle man

has had to elevate himself out of savagery. It has been possible only through excessive carefulness and love of the ego. The struggle for existence is now taking on class and corporate characteristics so that the common weal is an ideal quite as much as individual satisfaction and safety. Hence the exaggeration of personality may now return to something like a healthy normalism. As a natural outgrowth and consequence of this over-development of the individual consciousness, there came the absurd attempt to carry over into the after-life the same sort of existence that had been developed here,—consisting in a neglect of the actual world of one's descendants, an ignoring of death that ends the body and products of organization, and a failure to see that a future life after death must be a life of the spirit, of perfections, and of the common life, not of peculiarities and imperfections. If this seems an aery height and a too rare air it argues against your preparation for the only desirable as well as the only possible kind of immortality. It argues against you just in the same way that your horror

of death does. It is only participation in the divine life of the spirit that can see death as right and good. Death comes to shatter our baseless trust in the evanescent physical and teach us dependence upon the everlasting spiritual. They dread death whose life is of the physical type. God never gave to man a greater blessing, after life itself, than death, and nothing more strikingly proves the divine government of the world than the certainty of its coming to us all. If death is your enemy, life is not your friend. The brutal attempt to ignore the fact, the belief that the body with its pack of heathenish appetites and needs could push through death and come out fresh and renewed on the other side is the very insanity of individualism and the intoxication of materialism. The mourning, shudder, gloom, and horror of death,—God-sent if anything is—is practical pessimism and reckless atheism. Death's one lesson is that we must love and cultivate what he cannot touch. One who has lived a life of kindness and spirituality has no horror of death, and to him it has little mystery. But to him whose

divinity has been self and whose religion the worship of his physiological senses, death must be the ugliest of enemies who is to rob him of his all. Did you ever notice how life is plastic and free when first fashioning for itself a body? "All heaven lies about us in our infancy." In youth we are unselfish, aspiring, and noble. As the years go by the power of the organisation, the material, grows, and limits more and more the freedom of the spirit. Frankenstein turns upon its maker. With age men get narrow, cold, calculating; women snakey, scheming, cruel. The soul finds itself more and more the slave instead of the master, and by and by when the slavery becomes unendurable, it takes flight, and this you call death. It is the body's reward for insubordination. I think we deserve little sympathy for dying. Most of us have well-merited death before it comes—I speak, of course, only of the death of those in life's afternoon. Few keep the young life pliant and free beyond the age of fifty. If people could see that life is the maker and molder of organization, and if they would seek immortality

upon earth, I believe men might come to live a hundred years. Trees learn to live thousands of years, but they keep youth, and spring, and trust, and love, forever nestling with the birds among the rejuvenescent leaves of spring. We die not because the body is weak, but because it has become too strong. We die because there is no real continuance and strength in anything but the non-physical, and we have trusted in the physical. Matter without free life is inert, moved only from without: the dead body is simply matter without life. It is not the blacksmith's arm that is strong; without nerve-force it cannot raise an ounce, cannot raise itself. Whence the nerve-force? From the ganglionic gray cells of the spinal cord and brain. And whence these little gray cells? The dear stupid physiologist has now reached his limit, and you can confidently answer for him that it was Life that created these things, Life that existed before muscles, nerves, and cells, and that slowly fashioned them; Life, an order of existence in no imaginable way analogous to,

or to be confounded with matter or mechanics. There is in the history of thought no more ludicrous and dismal failure than the attempt to explain life in terms of mechanics. The hope of the materialist that science would prove his prejudice is torn to tatters. The children of the spirit are amazed at the bat-blind inability to see the fact,—to see that life is more certain and enduring than matter, soul than sense. The organs of the body are changed, diseased, die; the body itself dies; generations of bodies die, but like a retaining cord of silk, on which all the glittering beads of flesh are strung, there is the soul, the life, ever the same, persisting unchanged through all change, giving unity to diversity, molding, making, discarding, choosing, healing, working to far-away ends with blind, and dead, and obstinate materials. You love the flesh over-much and jealous life says to you, "Take it, then, this so loved and wondrous flesh; me you have not loved,"—and lo! the dead body, useless, decaying, lies before you. Let no materialistic misreading of science

hoodwink you into any blurring of the outlines between matter and life.¹ The two are as far apart as heaven and earth, are as dissimilar as thought can conceive,—perhaps in a final analysis, are the only two things of the universe. There is no fact of science showing the faintest warrant for confounding the two. Even Huxley calls materialism the most baseless of all dogmas. It will probably be found that there is but one element of which all others are duplications and combinations, atoms being but centers of force. But life is irresolvable into any form of matter or mechanical energy. It is not only unthinkable that matter could originate life, but it is demonstrably absurd. No scientist to-day believes in spontaneous generation. *Omne vivum, etc.*, is an axiom. The plant has no nervous system and yet has every physiological function possessed by the human body. It has contractility, irritability, respiration, anabolism, katabolism, and

¹ Those who think this view is the voice of faith and not of true science may profitably read a little book that has come to my notice since writing these pages: *Life Theories and Religious Thought*, by Lionel S. Beale.

reproductivity,—that is, it has spontaneous movement, it responds to stimulation, it breathes, it assimilates, it excretes, it begets its like,—and physiologically this is all you can do. Nay, more than this, even a drop of the jelly-like protoplasm that makes up the basis of all cell-structures, animal or vegetable, has also all of these qualities or powers.¹ There are bundles of wholly structureless, unorganized jelly that exhibit these capacities in a wonderful degree. There is, for instance, *Hydra viridis*, that has no eyes and yet sees, no brain or nerves and yet lies in wait for prey, pursues and fights, or flees from danger. Turned inside out it lives

¹ According to the latest scientific researches the dependence of all organization upon life is more clearly shown than ever. My friend Dr. Edmund Montgomery twenty-five years ago, as a result of extended experiment and research, showed that the body of animals is not an aggregation of cells, the force of the whole being derived from the enslaving and utilizing these subordinate organisms, but that the whole body is a single protoplasmic living connected mass or unit with functionally specialized parts. That this view is the scientific view of to-day and that the cell-aggregate theory is dead may be seen by consulting the article "Zelle," by Prof. Frommen in *Eulenburg's Real-Encyclopädie der gesammten Heilkunde*, 1890.

and digests its food as well as before. It holds live worms down with an improvised arm when they try to get out of its stomach. Any part reproduces all. Cut off the bottom of its stomach and it goes on eating, quite untroubled by the little accident,—and so on. A great, wise, blind man has defined evolution, or life, as the integration of matter and the dissipation of motion during which the matter passes from an indefinite incoherent homogeneity to a definite coherent heterogeneity, and during which the motion undergoes a parallel transformation. Some one else improved upon this by saying that it was “a change from a no-howish, untalkaboutable all-alikeness, to a some-howish and in general talkaboutable not-all-alikeness, by continuous something-elsifications and all-togetherations.” Schelling said that life was the tendency to individuation. But the crystal or the planet shows that, and they are not living. As the hand cannot grasp itself, neither can life define itself. All definitions I have seen miss the essential and primal characteristics of spontaneous movement. But all definitions begin

by begging the question—assuming the thing explained. The truth is that there is no definition or explanation possible. The dualism of matter and life must be accepted. There is no monism can bridge the gulf between mechanics and life. Inorganic matter with its inherent forces and laws cannot be conceived as ever coming into or as passing out of existence. From all eternity it was as it is, and so it will remain. The physical universe shows no hint of design, no glimpse of freedom, no trace of intelligence, no suggestion of a maker or God. It has no power of choice, no spontaneous motion. But the merest speck of living matter is utterly and absolutely different. It may have eyes or no eyes, and yet it sees, ears or not and yet it hears, nerves or not and yet it feels and reacts, brain or not and yet it thinks and plans, and acts in accordance with intellectual resolves. The dead body of your child is most inconceivably different from the living body of an hour ago.

The one fundamental mystery of the explainable world is why life seeks objectification in material forms, and why it seeks

it with such vehemence and ardor. Life seems to bite at matter as if with famishing hunger. One wonders if from some other planet life is being suddenly starved out or banished by some catastrophe, and as a consequence there is thence an over-emigration of the hungry Huns upon our earth. Certain confused and confusion-breeding philosophers in the interests of a theoretical monism or pantheism pretend to find or to believe that the organic is born out of the inorganic, that the physical world shows evidence of design, that life and mentality were implicate and latent in preëxistent matter. Yet they will accept the evidence against spontaneous generation derived from the fact that if you kill all organic life by intense heat and then exclude life from without you will never find life to arise. But it is plain that in the condensation of the dust of space into suns and planets all organic life was killed in the hottest of all conceivable heat. But as the planets cool, life appears. It must have come from without, and must therefore be a universal self-existent power.

Why, or how, or whence life comes to us we do not know now, but the transcendent miracle is ever before our eyes: infinitely rich and free, life is filling, thrilling, surcharging every molecule of matter to which with wondrous power and ingenuity it can gain access. It covers every thousandth of an inch of the earth's surface, dives into the deepest ocean depths, fills the air as high as the mountain tops, ever unsatisfied, ever grasping up a million million renaissance forms, never resting, never baffled. Before this omnipresent god one stands in rapt amazement and worship. To matter, then, life first brought, and still ever brings the power of organization, of adaptation, of spontaneous energy, and of movement. But when the death of the organization takes place, the life that preceded and formed it is not lessened or affected. When the watch wears out does it prove that the watchmaker is dead? It is more rational to suppose that the watchmaker has kept on with his work, that he has made and will make many more watches, and I therefore judge that the life of each of us, that existed before our

bodies, that formed our bodies, will still form other bodies after ours. The Oriental doctrine of the transmigration of souls is not to be accepted in its crude details, but it is doubtless a great truth. It is more rational and more consonant with what we know of life, than the theory of wasted life implicate in the barbaric notion of sending numberless millions of souls to hell to do nothing but suffer useless pain, and other millions to heaven to suffer (I use the word advisedly) useless pleasure. Any theory of immortality that rests upon the assumption of uselessness and waste may be quickly set aside. Just as matter and force are indestructible, various forms of force being interchangeable, so it must be with life. There must be a conservation of life-energy just as rigid, and this truth must remake and remold the whole conception of immortality. When a mechanical force disappears in one phase, it at once reappears in another aspect. Thus vegetable animal and mental life are but different aspects of life-force, and suffer no loss when transformed one into the other, or when the body disappears

altogether. And as it is the inherent nature of force never to rest so there is no rest for life. Banishment of life to a heaven of inaction is as impossible as it is absurd.

This extension of the law of the conservation of force to things biologic and psychic is a two-edged sword: it offers conclusive evidence of the fallacy of the materialist and unbeliever. There is no annihilation; your life at death not only may not stop but cannot stop. Life is as inextinguishable as physical force. On the other hand this sword deals the death blow to two equally shallow fallacies of believers. Just so sure as it insures the preservation of your life, of all that is worth preservation, just so sure it denies the possibility of preserving what was bound up with and produced by organization,—that is, individuality and personal identity. These things, if not entirely, are certainly largely the products of your peculiar physical and physiological organization. Whatever is born of the flesh must perish with the flesh; what is born of the spirit shall inherit eternal life. But the pro-

foundest and most distinguishing rebuke is given the unscientific, puerile, selfish assumption of the waste, loss, and uselessness of life involved in the old theory of heaven and hell. When from a chemical compound you take away and liberate one element or compound radicle, does it then shoot off into space to "flock all by itself" for eternity? By no means! It at once rushes into a new combination with its nearest neighbor, quickly picking up again the round of its duty and function. The curious notion that after having done work in one body, life or souls should at once rush off to some far-away star, there to sing or howl for eternity was a childish absurdity. One wonders where even an omnipotent God could get material for such an amazing manufacture and loss of souls. The theory also forgot that logic demands that what should live forever in the future must perforce have lived forever in the past. A rope, if it have one end, must have two ends. What, therefore, have our souls been doing during this past eternity? The truth is that absolutely speaking there cannot be souls, but only soul. Life

is a unit, and indivisible. The tiniest bit of bioplasm holds and represents all of life. Neither you nor it are separable from the whole. There may be education and progressive evolution of life as a whole, but there can be no individual and selfish salvation apart from the salvation of all other souls. The idea that release from the body at once releases a soul from action, duty, and the work of life, is an illogicality that could have arisen in no mind conversant with the demonstrated law of the non-wastage of force in any work of energy elsewhere. Life is never tired; it is the body that requires rest not the spirit. The old doctrine of heaven, an eternity of laziness, was the sigh of the sluggish flesh whipped to ceaseless work by the unresting life. The desire of heaven was the desire of eternal death.

This extension of the idea of non-wastage, the rigid conservation and interconvertibility of force, to things of life, gains a new significance and grandeur when we consider that whatever proves the immortality of man proves the immortality of every other animal or vegetable form.

The tree and horse have a soul quite as well as you, and must live after death quite as surely as you will. It is the flimsiest of conceits that makes men think they are endowed with a special sort of soul or divine life, different from that of animals or plants. Don't flatter yourself. God takes quite the same loving pains and care in the elimination of a leaf that he does of a brain-cell. Man is but a small part of the animal world, and the whole animal world is but a small part of the total life of the globe. Don't despise the vegetable kingdom: it can do something you cannot do—make living matter out of mineral substances. You could not live a day without the food furnished you by "your brothers, the plants." Hence if human life or souls cannot be sent off into space to do nothing, neither can the souls of animals and plants. If we are to have our heaven they must have theirs also. Does not this tangential theory begin to be clumsy and work with huge creakings and difficulties? It looks like *reductio ad absurdum*.

Not only is the tangential theory contra-

dictory of all physical analogies and all known laws, but it is positively immoral. It is but a refined selfishness. Worldliness is none the less sinful because it is other-worldliness. If billions of souls could thus be wasted in an eternity of useless pain or pleasure, could thus, drunken with individuation, hug their own sweet ghosts for never-ending time—then were life a farce, the universe a huge meaningless machine for grinding out waste and useless souls. But if all life, past or future, is one and indivisible, purposive, educational, then the world becomes full of meaning and the face of the Father, Life, smiles out at us from every living thing. The faith of all good men that goodness is at the heart of things is justified. The Earth becomes our home, that we can love; our Father ever dwelleth here; we cannot be banished. When we have finished our task, when our body has worn out, tireless life, of which we are the children and heirs, gives us here and now other work to do.

To matter, this tremendous cosmical game of incarnation can mean nothing. We see the dead flesh break up into sim-

pler chemical forms and the atoms finally spin off unaltered by their flesh-dance, again to be caught up by the mystic and unseen Master, again to be pressed into organic forms,—forms that like empty sea-shells only show where life has been. And so on forever. But to life some educative purpose must be operative through it all. Life that made eyes must see more than eyes; life that made brains must know more than brains. There is doubtless pain and strain; but is there to be no ultimate justification? We may catch glimpses of reasons. Do we not see an increase both of quantity and quality of life in geologic times? Is life trying to do away with death and heredity? Are they but makeshifts, death but a discarding of too obstinate material? Birth but a retempering and reworking of the same material? Heredity but the temporary means of passing life and its experiences onward until death and birth shall be found unnecessary in a growing command of chemical and physical forces that shall banish old age out of the world? There is no inherent reason why a body should

grow decrepit. If it can be made to preserve its suppleness for fifty years why not for a thousand? It may transpire that the dream of an elixir of life may come true through scientific progress despite the savage death-blow given it by Brown-Séquard. The more sin, selfishness, and wrong there is the shorter is the average length of human lives. If you will look into the rich and awful science of statistics you will find proof of this in every class of society. When we apply ourselves to enrich and lengthen our life-time with the same zeal we now use in killing each other—when the endowments of the world's scientific schools equal the cost of the world's armies then there will be a very different life-table found in the insurance-offices.

Finally with mournful echoing recurrence comes the old question: How much of individuality persists and passes untouched through death's fingers? How far does the graduate life carry with it the results of experience? I would answer: All that you ought to desire, all that is best, all that you will want when you fully

understand how little and poor is individuality and that there is something including it and far better. I have a strange inability, personally, to understand the, to me, absurd hunger after personal identity. It appears to me a childish obtuseness of character. The great and glorious freedom and largeness of life, the decentralized, impersonal quality of it seems to be unappreciated. I do not see how people can fail to understand that personal identity is not only impossible, does not exist now and here, but that the desire of it is the renunciation of progress. We grow and advance only by change, only by breaking up identity and becoming other. Think also of the lack of identity or individuality in nature. There is no personality and individualism there, and yet there is something that includes personality and is much more. There is will, consciousness, intelligence, life,—but not identity or individuality. So the life that is the heart of us invites us to leave our little self and find a larger self. Religion is our *yes* to that invitation. Materialism and pessimism is the saying *no* to it. The

immortality that is alone possible or desirable is the losing of our life, the individual identity-loving life, again to find it as the impersonal but richer, deeper life of nature and God. God denies you an immortality of individualism and identity because he loves you so well that he refuses you your crude childish desire in order to offer you something infinitely better. People do not seem to see how narrow, small and partial is the dissociate speck of the individual, and that as an individual progresses in all the virtues of character he ever becomes proportionally less individual and less centralized, always more like the divine prototype of his impersonal father, Life. The love of individualism is the love of imperfection. This may to some seem a hard doctrine. It is not perhaps an easy task for the butterfly to break its way out through the manifold bonds of its cocoon, but when risen into the large air and sunshine does it regret the birth-struggle? They who think they are being cheated of reality for a metaphysic illusion will find in breaking through the bonds of flesh that they also

have brought with them splendid wings for rising in the no less real but rarer air of spiritual trust in life. It is not that we love less the thousand ties of flesh, home and kindred, but that in recognizing the paternity and fraternity of all life, we find love commensurate with that life. I do not think there was any cold, stony harshness in the face of Jesus when he uttered those most profoundly significant of all words, "Who is my mother, and who are my brethren? Whosoever shall do the will of my Father, the same is my brother, and sister, and mother." What a recall to the common life of the spirit? What unity with the common life based upon loving obedience to the will of the Father. What a wonderful rebuke of the love of individualism. He did not love his mother less but humanity more. The more we rise into that impersonal atmosphere the more are we careless of the fate of personal identity. The composite photograph shows the fundamental and enduring quality, the average feature. In a certain sense life and history are taking humanity's composite photograph; but, inordi-

nately-loving individualism, each sitter conceitedly demands that his own picture be left untouched and unblurred by that of the others, and that his poor little portrait shall stand alone and forever—precisely what the divine photographer does not wish and will not permit. Obstinacy persists and God smashes the negative to the ground with the unanswerable argument called death. Because it is more than metaphor that in many ways your body may be likened unto a photographer's negative: created, for example, by the in-flashing of a heavenly ray of light among the highly unstable chemicals of matter; useless, except as an intermediate step to a clearer showing of the character; black and invisible unless shone through by the pure light of life and love; fragile as glass,—and lastly the poor, weak, shadowy, dead counterfeit of a throbbing, marvellous, living reality. The hunger for an immortality of the body, of the senses, the lust of immortality, is, in empty fatuousness, only comparable to the mania of a crazy photographer interested only in his negatives, and who never “develops” one, or to the

foolishness that values photographs more than the friends themselves. If we once get our spiritual eye fixed upon the deep reality and unity hidden by the Maia-veilings of individuality and flesh, the cravings of our weak hearts for eternal continuance of our little bundle of littlenesses, would fall away from us as softly as the wayward longings of childhood. We could then see that it is the quality of all life, the progressive purity, power, and increase of life in the abstract, that become all-important. Religion would become the love and veneration of Life the Father of us; morality the cheerful obedience of the individual to that Father; Heaven the reëntrance of the individual life into the great unity. Much of the old religion was irreligious; its God a far-away dead abstraction, not a living, ever-present-love; its immortality was at heart a desire for death, its spiritualism at heart a barbaric materialism. To this death of faith and irreligious religion, comes the sympathetic study and love of nature—that is, science—and reveals to us the opulence of life, the infinity of intellect in nature, the inexhaustibleness of her

resources and of her diversity, her beauty, and her splendor. The old materialistic degradation of religion forefelt its doom would come from this spiritualistic revivification, and the devotees cried out against science as atheistic. And science found some foolish enemies in her own camp who, misreading their divine book, joined in the cry—"Nothing but mechanics!" It was a dismal short-lived croak. We now see that not only are science and her workers religious, but without scientific knowledge there can be no adequate idea or practice of religion. You can't love God unless you love and know what he is doing in this universe. The man who in a walk goes neglectfully and obliviously by a million mysteries and wonders which God has been toiling to eliminate for ages,—such a man cannot lay much claim to God's friendship. If we love our friend, we have some interest in the deepest concern of his life. The foolishness of all fears is the fear that science is somehow going to destroy all good things of faith and life. In truth it reveals all good things. It demonstrates and manifests both God and immortality,—God as

the Father of all life, immortality as the surety of the conservation and non-wastage of that life. Much of the fear of science, is, as I have said, the fear of the old materialistic religion in presence of the larger faith that burns up its beloved errors. They who had been promised and had argued themselves into a groundless belief in the value and immortality of a bundle of sensual appetites, selfish desires, and imperfections saw far in advance that any large study of life and nature would dash their wretched faith to atoms. And science has over-ridden this unfaithful faith. "He that soweth to his flesh shall of the flesh reap corruption; but he that soweth to the Spirit shall of the Spirit reap life everlasting." This is as true scientifically as it is true morally and religiously.

People generally cherish the delusion that their hunger, pretended or real, for immortality is a virtue and a thing to be proud of. Careful observation has convinced me that in many cases it is distinctly and nothing less than a very narrow sort of selfishness. It does not usually flow from a large love of life, or of the things

Life is seeking to bring about in this world. People who believe most vindictively in the belief are such as have done very little toward enlarging their own life or that of their fellow-men. It is commonly supposed that there can be no greater heresy and injury to both religion and morality, than any negative attitude toward the belief, or doubt thrown upon it. But I am convinced that it is very commonly, if not usually, of distinctly pernicious influence upon character and society. If one believes in the old-fashioned "soul," and in its "salvation," and that one's own soul has a surety of heaven, nothing can more effectually breed practical fatalism, *laissez-faire*, and egregious conceit. The consummate ludicrousness of a "sanctified" and saintly crank is only better concealed in many who have been less clumsy in the self-cheating and delusional processes of mind whereby they have erected a very high wall to hide ugly truths and plain duties from view. The perfervidness of the belief, moreover, has always a plain smell of intoxication about it; it is almost always an artificial emotion, whose

strength is largely dependent upon the amount of misery and poverty hidden by the illusion of a false gaiety and a pretended certainty.

There was once a splendid scoundrel who defied government and armies with a horde of invincible slaves to whom danger was delight, and who sought death by unfaltering obedience to their master. Their belief in after-life, and in its disposal by their tyrant god, was made incomprehensibly strong by the trick of drugging them with a narcotic, and, while insensible, conveying them to a mountain paradise where every delight of every sense was drenched with satisfaction. After this foretaste of heaven, they were again put to sleep and conveyed to the world, and after this there was no doubt about obedience to the commands of a master who had at his disposal such a heaven as that. To get on the safe side, to win by excess of flattery or obedience the good will of a tyrant god, has been too common a characteristic of religion; and so, alas, has the seeking of immortality often been a sharp looking out for "number one" in the chances of life.

Just as the sacrificial aspects of much religion, scape-goat sheep and scape-goat Christs, have been tricks, fine or flimsy, to get rid of conscience and compound with the devil called God, so the attainment of heaven has frequently been a fine game to get the advantage of one's enemies, and of those not so cunning. The rabidness of the belief has usually depended upon the proportion of the few saved and the many damned, and the frightful immorality of any salvation whatsoever enjoyed, while there was any damnation suffered, was a thought kept well out of sight.

The unconscious power and origin of the belief, however, have, of course, come from larger and deeper minds and reasons than such self-seekers could fathom. The arising of the belief in historical times and religions, where it was heretofore non-existent, seems to me another example of the breaking forth of the consciousness of man's divine origin in nature, this consciousness and belief having been kept in abeyance by the demands of the nutritional struggle and progress in incarnation.

These early shapings of the doctrine are the crude ploughing and breaking of the ground for a better harvest. No great religious truth comes so suddenly to perfection as this, and the belief must yet cleanse itself of outrageous crudities, and perfect itself to finer issues and more truthful truth. After the establishment of the fact comes the limitations of degrees, and the refinement of qualities. Like all other deductive and religious truths, this belief must be made scientific; the rational systematizing consciousness must take it in hand, and it must submit to the calm estimation of proof, limit, and degree, of a sympathetic but unbiased judgment.

“If a man die shall he live again?” The very wording of the question betrays the visible hope, the doubtful longing. One feels the wavelet poised for an instant in semi-independence, and the large ocean certain to draw it back again. The wording also betrays the crudity of the conception, and answers itself. There is shown an entire lack of discrimination as to meaning of words, and extent of facts. What is man? What is death? What is

it to live again? To the unthinking the answers seem very easy to give, but to the thoughtful they arouse profound counter-queries.

In the ordinary and accepted definition of the word, "a man" is understood to be any representative of the genus *Homo*, whether he be a nameless African savage, or one of civilization's most cultivated scientists. If the fact of possession of the human form implies the possession of an undying soul-life, then no line can be drawn at the upper limits of the animal or vegetable kingdoms. Everything that lives is so strikingly filled with the same mental force, that it is the veriest trifling to deny any animal and plant the same right and necessity of future living as ourselves. This brings into view the clear evidence of absurdity in the common doctrine. According to that doctrine heaven, or the function of the future life, is to be one of enjoyment and general objectlessness. There is here a withdrawal of divine energy from use or work that is unlike anything else known or thinkable in all the worlds of mind or mat-

ter. If the possession of such "soul," divisible from body, is certain in man, it is, as I have said, certain in animal or plant, and if by natural or divine ordering, this homo-soul, at the death of the body, rushes away from earth and work, so, precisely, must animal and plant-soul spurn matter and life therein. Not to assent to this introduces a new principle: either animal-soul and homo-soul are essentially different, (which nobody would now be silly enough to affirm), or there is introduced a stage of progress or a degree of soul only thus rewarded. To make salvation or the heaven-getting of soul depend upon any such indeterminate and indeterminable point of progress or merit is, from that point of view, to land the whole question in an immovable cloud of vagueness. To drain off from earth and from functional activity the souls of plant, animal, and human beings that die in one year alone, would require an infinite inexhaustibleness of the Source of Life. There is not the least reason to suppose that the law of the conservation of energy is not as rigidly applicable to Life as to any other form of

force. To attempt to conceive it otherwise lands us at once into unthinkableness and nonsense.

We therefore see that any fact of immortality must be in harmony with the fact of the life or soul of all living things, and that functionless life or soul is quite as abhorrent and unthinkable as functionless force of any kind. The beauty of such a conclusion is the proof that the sort of a soul and heaven commonly desired is as inethical and irreligious as it is unscientific and impossible. "Salvation" was a spoiled child's theft of the cake of happiness and hiding in the garret of heaven to eat it alone. There may be such a heaven of inactive enjoyment and selfish pleasure, but God's Buddhas do not enter it while the struggle of the world-process is still going on, and I have such a firm conviction of His loving justice that if His Buddhas beneficently postpone it of their own will, selfish laziness will hardly be able to steal past His inattention. Parasitism is, after all, a very small fact in the world, and even that is usually made to confer indirect blessing. The radiation

of the sun's light into space is not lost or losable, and if there is such an irradiation of Soul into the regions of space as the common idea holds, I suspect it is none the less functional and utilized somewhere and sometime. As neither can be annihilated, they must go on until "absorption" does take place. What is the influence upon character of persistent enjoyment or resting, is plainly seen in the depravity and mental vacuity of our social do-nothings. Life is a force, and Biologos is of all things a worker: it is hardly probable He will excuse His forces from activity, or His souls from work. Heaven is quite the last and absurdest thing to think of.

As we daily see, there are two ways whereby soul-activity is kept persistent, and immortality really attained: by heredity, and by spiritual influence. The first is more physical in mechanism, and seemingly the more powerful; but the second, I doubt not, is, in a large way, quite as real and more effectively strong. Marcus Aurelius sends his thoughts, the sample and ideal of his soul, down the centuries, and procreates spiritual children wherever

his words go. But by heredity is the more certain and methodical manner, and no sin is greater than that of large minds and hearts refusing or ignoring the duty of child-raising. It is towards this that the world-process has struggled for a million years, and the thread of purpose, tirelessly and patiently followed through the long labyrinth of development, is thus cruelly snapped in an hour of selfishness and waywardness. If there is any significance and object in the incarnation-process, it is bound up with the best type of civilized manhood and womanhood. Therefore, the very acme of sin against the Holy Ghost is refusal to perpetuate that type. If the old idea of a judgment-day were a truth, the first question asked of the civilized sinner would be not as to murder or any crime against present society alone, but as to the more heinous crime of disloyalty to God Himself, to His work, and to the future, by wilful disobedience to the second law of the incarnation-process.

And if by circumstance or accident child-raising is refused to one, it behooves him to devote the same energy and self-sacri-

fice to the fundamental aim of Biologos: orphans are to be raised, and the work helped onward as evidently purposed. Or, if perhaps to such be given an exceptional power of thought, or other means of after-death influence upon the world, that function should be exercised as a distinct atonement. "It is dangerous to be believed," only when the belief inculcated contradicts the evident purposes of the subtle wisdom moving all life. There is never much danger in simple kindness, and much of our misery and sin come from lack of it.

The genuine "victory over death" and the grave will come only in the persistence of continuity of the pliant and progressive individual. In the meantime, the thoughtful kindness of God is shown in the peace and silent ease with which duteous souls slip the bonds of finished life. To those who have completed their clear duties, death's visage is no horrible one, and to them the final rest comes as the night's sleep, which is indeed a daily warning and reminder of it, and initiator into it. From His obedient animals He has hidden

the very knowledge of death, and at life's proper ending His obedient human children have become so wearied with the long day's work, and the twilight of life's evening so softly and sweetly passes into the night of death, that the silence of the unseen stars only equals the silence of the tired-out heart. The body has not been their chief love, nor things corporeal their sole concern, and, in losing the body, self has not therefore been lost. But it is they who have not been loyal to God and aidful in His work, they who have not found, explored, and utilized their own spiritual natures, these are they that fear death and shudder with horror at his approach. Reliance upon the spiritual generates that confidence in it that robs death of his terribleness. They who have loved life for the body's sake, thinking corporeality the end and not the means, such naturally feel that in giving up the body, all is given up. "The lack of evidence of immortality," of which the complaint is common, seems to me a most wise provision on God's part. The lack must continue until the task to which we are set is completed, and the

consciousness of one's own immortal nature is so clear that evidence of the common sort would be positively needless, or even repulsive. It is well that the evidence furnished by the motley crew of spiritists is so valueless and inconclusive, else the race in possession of such a certainty would become as spiritually degraded and vapidly materialistic as these precious folk. God would indeed be cruel to provide such a heaven for us, or to make us so convinced of an undeserved immortality, that the lesson of corporeal life would be utterly misused. Mankind are always seeking and making for themselves the illusions of fatalisms and certainties which excuse inertia and obviate the pain and fact of progress. None such is more potent for evil than this of an unfaltering belief in immortality, which, even if the desired were obtainable, hides duty too deftly, and neglects that preparation of spirit here that alone would make a heaven anywhere. The doubt and the doubtful hope arouse the startled heart to a study of the conditions of immortality, and keep it plastic to the ideas and influence of the

spirit of God ever drawing us subtly and kindly to the life of the spirit.

A little reflection will show us that what is usually prized most as worth a life after death, are those things least liable and least truly worthy to outlive the body. It is individuality, peculiarity, or the specific difference of self that is hugged with an exaggerated care and fervor. But all spiritual progress is progress out of individualism and peculiarity and difference. Reaching and gaining true personality is leaving and losing true individuality. As we approximate perfection we become nearer alike, and the ideal of all perfection of character is that of God, all imperfections of finiteness having been left and the equilibrium of all attributes attained. The belief in any specific difference of essential being is largely begotten and nourished by those differences of organization and corporeality which are constituted by the accidents of incarnation. It is almost impossible to think of them as not rooted solely in matter. As we travel inward along any or all lines of sensation, each organ referring elsewhere for its

raison d'être, and as we follow out the reference until is reached the last secret chamber beyond which there is no reference, we find that we have long since left behind us most that renders us recognizable, or individually peculiar. We have thus attained a purity and perfection of our deep inner being that is nearly or quite identical with that of the essential being of everything else that lives, and like that of pure spirit before clothing itself with individuality and materiality.

Whether a spiritualized and noble personality can hold unified, through and beyond death, the cluster of peculiarities and attributes which, if existing, are uncaused by the accidents of organization, and that therefore do not end with disorganization, this peculiar cluster that we specifically distinguish as our friend—this neither God nor reason nor experience has certainly told us, and for this doubtful, hopeful, blessed ignorance, let us thank God, and seek not too curiously to raise the veil. Perhaps our ignorance is proof of the comparative unimportance of the question. As the highest souls value the distinct and

separate individuality ever less, and always seek the perfection of non-individual personality, so our means of the attainment of genuine immortality is in that power of spirit over time whereby the future is always present and mortal life is merged into the immortal before death comes. Such souls have long known that materiality or corporeality is the scaffolding about the steeple of life (the tower supporting the scaffold as the spirit does the body), and when the spire is completed, the workmen and death remove the hiding framework of both buildings to allow the self-sustaining column to stand forth in naked beauty and aspiring strength. And as in everything else, the beauty and strength, both of spire and of spirit, will approximate the ideal exactly in proportion as each has escaped the peculiarities and defects of individualization, and has realized the unique purity and perfection of the divine Architect.

It requires but a little study of neurology and psychology to give demonstration to this truth. The products of organization die with disorganization. Most, if not all,

of what people mean by individuality and personal identity is a product of organization, is an accident of incarnation. Children are similar to each other; they are lovable partly because idiosyncrasy and individualism have not yet developed. As we grow older we cultivate individuality, until the very old are often angular, cranky, individual with a vengeance! Death, thank heaven, is the end of that, the certainty of a non-eternalizing of the imperfect. Birth is a new trial. Incarnation and reincarnation are the ever-renewed work of Life. Through the laws of heredity, through physiology, sociology, and biology, science is tirelessly illustrating to us how all life holds together, how individualism is valueless, and sacrificed to the common weal. There is no escape, sensual or supersensual, from the world's great common life. The old selfish dream of a heaven apart from incarnation, from doing and becoming was a pitiful mistake. You cannot clutch your cake of happiness and like a spoiled child run into the attic of heaven to eat it alone. Life will see to it that you do not slip off. And if you have

been born again of the spirit you will have no such desire, but will beg for kindred work upon the old earth-home.

In the meantime the conclusion is clear: to love and aid the work of our master Life we need not wait for death. We may not seek our own salvation; it is no matter whether you and I are saved or not. The reincarnation of life is our work here and now. It took you twenty years to fashion out of a microscopically-small speck of unorganized protoplasm your body and brain. Within us we are to keep that organization from cramping and binding the life,—keep life as large and free and pliant as possible. Outside of us the incarnation goes on as well, and every person you influence either for good or for ill, thus by the fact becomes a product of your incarnating work. Every day you have a hundred opportunities to give, without lessening your own supply, some of your own life, to increase the quantity and to elevate the quality of the general stock of the world's life. Help the young, they inherit the world and will use it well or ill according to your teaching and example. Stop

cruelty to animals, they are your brothers, filled with the same life as your own; fight the political ruin we are preparing for ourselves by partisanship, bribery, and class-legislation; discourage war and intemperance and lessen the tyranny of the strong and wealthy. Wage a ceaseless war to the death against luxury, the poison that is eating and rotting the hearts of all of us; love trees, meadows, clear brooks, the mountains and silences of Nature. Love, not so much your own or another's individual life, as Life itself. There is otherwise no immortality.

The divine story tells us that after measureless suffering and self-purification, Buddha had gained the right to enter Nirvana. With compassion filling his heart he put his merited reward aside and resolved to remain without to teach and to help until every child of earth should have become his disciple, and until every disciple should have entered Nirvana before him. Such must be the resolve of every true lover of life and of every right seeker after immortality.

CHAPTER V.

BACK TO THE OLD WAYS!¹

WHILE God was still alive and Love was Life, it was not so. In those dear far-off days the young, entering on their work learned to say:

My duty towards my neighbor is to love him as myself, to honor and obey the civil authority, to submit myself to all my governors and teachers, spiritual pastors, and masters; to order myself lowly and reverently to all my betters; to hurt nobody by word or deed; to be true and just in all my dealings; to bear no malice nor hatred in my heart; to keep my hands from picking and stealing, and my tongue from evil-speaking, and lying, and slandering; to keep my body in temperance, soberness and chastity; not to covet or desire other men's goods; but to learn and labor truly to get mine own living, and to do my duty in that state of life unto which it shall please God to call me.

¹ Putnam's Monthly, September, 1907.

An echo from some lost Arcadia, that—a sigh of banished ones, as they see the gates of Paradise closing behind them! Do the young at present, do the older ones, indeed, see any meaning in the words, *Duty towards my neighbor*? Does one even love himself nowadays? May it not almost be asked, has one really any self? Is not personality itself forgotten or annihilated in the mad intensity of the rage for doing and getting? Being is lost in doing. What youth—boy or maid—submits to governors or teachers, desires to do so, or admits that for him pastors and masters exist? Do the young have “manners,” and are lowliness and reverence to be found in colleges, in preparatory schools or even in common schools? Do not these boys and girls deny by word and deed that their betters exist? In dealings do they seek to be truthful and just? Is there any aim to keep malice and hatred out of their hearts? “Picking and stealing, evil-speaking, lying and slandering,”—what crowd of loafing boys or girls, men or women, in any village or city of all the United States, does not illustrate rather than dis-

prove? Is it the aim of many of us to keep our bodies in temperance, soberness and chastity? It is the age of commercialism; does not the business youth or the "successful boss" he emulates covet and desire other men's goods? Who labors truly to get his own living instead of the living of his neighbor? Who feels that God calls him to a state in life, and desires to be satisfied in it?

Financially it is the stockbroker's age—the village and the small city are held as subordinates of the larger capitalistic centers, which again are simply cunningly woven spider-webs for catching the unwary smaller gamblers. The word, "graft," characteristic if any is of our time, expresses the malevolence of its coiners and illustrators. Into a healthy stock, well-rooted and of pristine virtue, the farmer inserts a later cultivated stem, which transforms the sterling parent sap to liberal fruitage and more generous yielding. But all for the good of the farmer and cultivator! Capitalistic cunning caught the hint, and wherever there is an honest producer there are innumerable grafters, in

graded series, seeking to steal and wholly take away from him, rooted there in the soil, all his life and sap, and squander the fruitage of his virtue upon the iniquities of distant luxury and vice. Government, an amazing democracy (falsely named), strikes hands, and by means of a so-called protective tariff makes the producer buy at artificially inflated prices and sell in the competitive market. Thus a nation of deserted farms, of exhausting natural soils, forests and resources, and of systematically embruted farmers. The living, growing thing, the produce of the cultivated land, as we all know and all strive to forget, is the condition not only of a healthy and virtuous people, but of social living itself. To cheat the farmer is poor policy, either nationally or personally, and the appeal to the physicist and chemist, in "the struggle for nitrogen," will be of no avail. No more than children will families and farmers, wheat and corn and animals, grow without love. God cannot be cheated even by a Wall-street expert. Farming, either of the capitalistic or the small-farm variety, has become like all

other trickinesses, a game of exhausting the soil, which profits for only a little while and in the long run ruins the short-sighted plunderer. When the game is systematized and governmentalized, it is only another case of "after us, the deluge!" *Ex Oriente Lux!* As in so much else Japan shows the prodigal Occident the way. With a few thousand square miles of arable land—a mere fraction of that which we wastefully misuse,—she supports, by scientific and prudent cultivation, a population one-half as great as our own. *Back to the Land!* must be our insistent and continuous cry.

Because economics (household government) is the foundation of all prudence, it is also the foundation of morality; and the cheating and enslaving and brutalizing of the farmer are the greatest and most needlessly stupid of all national sins. The road, *Back to the Old Ways* leads first *Back to the Old Farm*, for it is there one best and most thoroughly "learns and labors truly to get his own living." We should even reverse the whole proceedings of the "protective tariff." The manufacturer

can surely look out for himself—he needs no artificial stimulus. But the profits of the small-farmer, the tiller of the ground, are hardly gained and doubtfully harvested; all manufactured and all foreign-made things should be cheapened and brought to his door by every help of legislation and device of mechanics. That government should plot a game of “graft” upon the 85 per cent of its citizens for the benefit of 15 per cent, is an astonishing evidence of the infamy of the New Ways. To “turn the rascals out,” and not put new rascals in, seems therefore the simplest and first duty of farmers and of all who labor truly to get their own living.

But to do this they must first go back to another of the old ways, the town-meeting—that is, they must first demand back from their political bosses a representative government, a true democracy, or a genuine republicanism—for both are the same thing. Democracy must become democratic, and republicanism must re-establish the republic. The old Declaration of Independence must be redeclared, and its modern substitute abrogated; but very ac-

tual dependence must be utterly abolished. It will not be necessary to fight plutocracy if we gain the easy victory over graftocracy and bossocracy.

My friend the tinsmith was yesterday repairing the eaves-troughs about my house and I invited him in to lunch with me. I never sat at table with a better-bred gentleman. He taught me more about labor, trades-unionism, etc., than I had learned in all my reading. His father was one of half a dozen brothers, all good workmen at the tinsmith trade, and one after another he taught his ten sons the same expertness and morality, and these ten men are now at work tinsmithing in two States, all successful, healthy and happy. A man, he said, could make more money, at least for a time, in the city, but he has no mind to move from the village, and for the best of reasons. "There are no apprentices now," he says, and dozens of his schoolmates who sought careers, foolishly supposed more aristocratic, are sorry failures in life and character. So far as occupation goes the advice to hitch one's wagon to a star is to tumble wagon, horses

and driver into the gutter of a deserved failure. In grinding his lenses Spinoza made a poor attempt to "think God," but it was better than to think ungod and no-gods.

The present-day lens-grinders behind your optician's shop also think some kind of a God—but what kind? They have as good opportunity and as much time for the thinking as had Spinoza. They probably waste both in cursing the "fate" that ties them to their tasks. They are free, however, to break their fate, and their fatalism. If socialistically inclined, they are certain to bemoan civilization's "differentiation of function," which they think compels them to kill mind and ingenuity by day-long, life-long, redoing of the little, humdrum thing. Is not that a confession of inability or disinclination to be like Spinoza, and pass to a freedom of mental action which rests the fingers, the eyes and the attention, drops the lowly stint, and walks among the gods, and with God? Disgust with the calling is not the way to progress. We must all work, and it is a crude observer who has not seen that they

who do not work, if such there are, are not so happy as the workers. The squanderers and idlers are far more unfortunate than the farmers, the housekeepers or the "servants of machines" in our multiplying factories. Is the capitalist more fortunate or more enviable than his workman? Surely not, unless he has mentality and unselfishness which outrun "capital" and "labor"; and such altruism is as entirely in the laborer's reach as in that of his "master." To do well and to have pride in the doing and the condition of well-being and satisfaction, rather than to do greater things and wield larger power. For the least bolt of the machine of civilization is of as distinct a value as the "governor," and, egotism apart, the governor itself is a small part of the whole mechanism of modern life. What nonsense is it to be cast down because one is only a cog, or to be puffed up because one is a throttle-valve! The greatest financier is, in the end, as much a "slave and tool" of the vast social mechanism as the dime-savings-bank depositor. Envy or disdain on the part of either bears equal witness

to his pitiful limitations. Each prefers his slavery to an easily acquired manumission. It is as monotonously wearying, it is as hard labor, to lend, spend, or even to give away an income of millions, as one of a thousand. And the hardest and most pitiable toiler is he who with an income of a few thousands tries to ape the millionaire. In a different sense from this, too, a man may be a millionaire on a thousand-dollar income. Should one wish to do veritable good in a charitable way, it is literally true that he may be as helpful to others by a dollar discriminately given as by thousands given without discrimination. One who personalizes charity will accomplish more uplifting by giving himself than by giving money. The poorest benefit is the financial one, of course. The greater part of bequests and endowments work evil in the long run, as all students of economics well understand. The giver of self, moreover, benefits himself the most,—for the miracle of love is the increase that comes by giving, the breaking up of one's own limitations and bonds by giving freedom to others. As with light, so with

true wealth, sharing with others does not lessen one's own store. And the hidden and denied God knows that labor alone creates character. Character is the reaction of will against circumstance. In all things psychic and moral the popular evolution doctrine is false. The environment is not the maker of the spirit; unless fought against, it is the spirit's degrader. Science, however, has not yet learned that man has a spirit. The nearest it has come to that knowledge is what Bagehot called "the cake of custom;" but even this labor only can make; this labor is the guarantee of that settledness of social life, without which all is chaos. *Back to Labor!* then, is the command, renouncing the fashionable pleasure and leisure, if we would have true pleasure and leisure. Remember, said a wise, good teacher, remember that Happiness is an angel ever at your side if you do not turn your eyes to look upon her. If you turn, she disappears! All are turning now to woo her—and they are most miserable, for Happiness has left us!

The most fundamental and far-reaching of all the distinctions among mankind are

those of sex, and how one solves the eternal sex question, in thought, feeling or practical living, will dictate or indicate his solution of most other questions. Because, whom does not Love rule, and where is He not Lord? He most enslaves his ascetics, deniers and traitors, and least the fool. Love is in truth the riddle of the sphinx, and, as Weininger found, she ruthlessly devours those who do not solve it. Too many have forgotten that love is as much subject to the law of evolution or progressive development as any other biologic thing. It is the most typically "henid" product of life. How could it be otherwise, when it is not only product but also spring and mechanism of life? God never ceases to teach that there is something better for us than individuality, and that personal immortality is not His chief aim with us. Woman, as most of us admit, is far more obedient morally, more religious than man, is in truth the ethical agent of the biologic continuance of the race. Beyond question, Teutonic love needs development out of its homogeneity, or its "henidism." For what biologic or

psychologic attribute is of greater complexity, and usually of less differentiation, than love? Since we have left the monkey-type, there has been added, how many phases, often as yet interfused and awaiting unfolding. Finck has found thirteen more varieties of love than Weininger, and Finck's fellow countrywomen could each have added another. "But all depend upon and lead to one thing?" Yes, and so does all life—to that, and to the education of the begotten. What else but that is there to it all? Go to! In the last thirty years we Americans have gone too far back, even to the Roman "simplicity." But since we left Rome the idea of love, the practice of it, by enduring families, has become rapidly more complex. To the *unum necessarium*, never omitted, have been added permanency, monogamy, home-keeping virtues, pedagogy, public health, civic and political honor, democracy, and a thousand such components. Our riotous modern divorce practices and statistics are the sole proof needed that our forgetfulness of the hundred associate parts of love and returning to Rome were a going too

far back to the old ways. For, as in all things else, it is only the more recent old ways to which the return is urged. There is an end of the matter with the statement that that sort of love will not suffice for building the future which is based solely upon sensualism. Henceforth there is no advisable love unless it is as reverent as it is romantic, as permanent as it is passionate. The foundation has indeed been built since karyokinesis began, and verily let us have no fool's nonsense that ignores clean, pure, strong, animalian sensualism. But just as little, from now, may its consequences be ignored or refused—the mother, and the child which insures all future motherhood. The hideous divorce statistics point to far more unspeakable things in our large cities, denied by none and lately much in evidence.

Note, now, what all admit—that women are what men have made them; always less bad, however, than men, for the women of any Babylon are more ethical than the Babylonian men. Otherwise, of course, propagation would stop and that Babylon would end. Kant's great rule was that

we must never use humanity as a means to our individual ends. That marriage and that divorce are immoral which break Kant's immutable law. *Back to the Old Ways!* Back to the older woman, indeed, for the "New Woman" is already entirely too old—hoary with the vices of antiquity, and the woman of a hundred years ago is timeless and will always be young and lovely! She found us young and she will always keep us so.

And it was woman who made the Home, —the home we are so fast disusing and forgetting. There will be no abiding and true civilization, no enduring happiness except in and through homes. Flats, hotels, palaces and watering-place "villas," rented walls, yardless and landless buildings, rows of thousands all alike—these are not homes, and they can never breed the virtues that rise in the simplest houses built for one's children, and in which the grandchildren will live. Urbanization is the lure of Mephisto whereby the indiscriminating sell their souls for a sorry and fitting gain. What a commentary it is that the lovely and virtue-ex-

pressing word, *homelike*, should have degenerated by our unvirtue into *homely*, the unlovely and unseemly! *Back to the Home* is again the command, if we wish our name and hope to relive in the valor and virtue of our children, and of their children.

As to the priest and the preacher: In ancient times the greatest criminal, masquerading as king, chose to commission some sycophantic parasite to flatter him before as many of his dupes as could be drilled into the cathedral. They were allowed to worship God theoretically and a little, on condition of worshipping the king practically and a good deal. The modern king, Pluto, has not forgot the trick, and an amazing spectacle it is to see millionaires support the religion of the carpenter-preacher who once delivered a famous Sermon on the Mount. If the Catholic could be catholicized, if the Protestant could be protestantized! If all could be humanized and religionized! Certainly it may not be except through teaching the old catechism, by practicing,—“Duty to-

ward my neighbor is to love him as myself, etc."

As to the lawyer: A great one lately died; he was not a promoter, nor "a corporation lawyer;" his aim in life was not to do illegal things by means of legal acumen and diabolism. He was never a politician, nor a partisan, nor a hunter after the modern trinity of gods, Success, Finance and Fame. This is what he wrote, reviewing his life:

I have indeed much to be thankful for. I have received numberless kindnesses from judges, counsel and solicitors, as well as from clients. I have never had a serious personal difference with anyone, and have never been a party to a lawsuit. I may be said to have been fortunate, but I believe that the road to such success as I have had is open to any young man entering the profession who may choose to follow it, and devote himself to legitimate professional work, and abstain from moneylending, company promoting, financing builders, and speculative business, and give constant, careful and anxious thought and attention to the professional business from time to time entrusted to him.

As to the physician: It is much the same story, but, as the rule is, with a difference. A few country practitioners are left who practice medicine with the single desire to cure their patients. The bedside, clinical, empiric wisdom and duty have been deserted for the "scientific" professional and laboratory unwisdoms and non-duties. In practice, more than in theory, of all these great diseases that afflict humanity—headache, "migraine," dyspepsia, nervous and mental diseases, epilepsy, crime, insanity and a hundred kinds of functional and nutritional disorders—there is almost no curiosity as to cause, and there is less inability to cure. Every lecture of every Professor in all the morbidly large medical colleges of the land should begin with: *Gentlemen, Back to the Bedside!* and should end with: *Seek to learn the causes of Functional Diseases! When you have learned these causes, and when you have cured your individual patient, then you will have heard the divine command to commit professional suicide by preventing disease!*

Every physician, indeed, knows in his

heart that we have eaten of the tree of knowledge more than we can digest, and that if the known laws of public and private hygiene were put into execution the death-rate would instantly drop 50 per cent. Moreover, the modern serpent in the tree is atheistic, monistic, deterministic, and therefore hopelessly loveless. There can be no cure, nor is there any prevention, of disease unless the little physician is the child of the Great Physician, and learns of Him how wounds heal, how sleep restores, how wise "Nature" persists for years, for a lifetime, through all lives, to outwit, heal and undo the injuries of disease. Aping an unenviable and blind science, medicine has been too prone to materialism, although before the physician's eyes, as before those of no other man, have been the amazing miracles of sexual and mother love, of the healing of wounds, of the giving of the body to be normalized in sleep to something infinitely wiser than we, and of the ceaseless struggle of the hidden physiologic God of Health against the hurts of disease. All these, in addition to the absolute non-ex-

istence of spontaneous generation, would convince men with logical and open minds that materialism, atheism and determinism are the shallow delusions of fools.

And as to Science itself: Every scientist self-supposed or real knows and admits that its only legitimate method is and must be induction, but every one is ruled by prepossession, theory and deduction, to the infinite loss of science. We are not a step nearer explaining the origin of life than we were fifty years ago. None has ever produced organic or living substance from the inorganic or non-living, and yet biologists deny life, and living beings say they came from lifeless sources. Even so great a man as Huxley set the fashion, but Huxley was too great to live in such a state of muddle-headedness. He repented of his silly "Bathybias," but no modern imitators who discover Bathybiases every day imitate Huxley in his repentance. They dominate facts with theory, and unblushingly invent new gods every other day,—Protoplasm, Chemism, Chemotaxis, Electricity, Radium, Heredity, Law, Ions, *tout ce que vous voulez*.

They are constant only in scorn of "vitalism" and the "vitalists," they who are vitality, and of superstition, they who are most superstitious. They hate Lamarck because he allows the existence and play of spirit in the biologic process, and they worship Darwin and Spencer who counsel monism and materialism. Oh, let us go back to pure induction!

In pedagogy where are we? The competition for endowments, the rivalry for success, the greed for hugeness, the sale of honorary degrees to kings and famous men, the cultivation of "athletics," which means mostly the purchase of football fighters and the limitlessness of rowdyism, the prevalence of young men old in clubdom and vice. It were best to return to the old love of scholarship and gentlemanliness.

Do we entertain any hope of present-day literature? They who read it of course deserve their fate. But the future will forget and bury in fitting Carnegie mausoleums most that our scribblers now grind out. The apotheosis of the craze is the modern newspaper. Even the least

yellow of the sell-souls do not preserve a copy beyond a day—so cheaply and properly do they and the public value all the enormously expensive product. The old books of more than a generation ago, a score or so of them, should suffice for intelligent and discriminating tastes.

Philosophy, Metaphysics, Psychology? Did they not begin and end with Kant? After him has metaphysics done more than deny metaphysic, the very existence of that which is beyond the physical? Do the aftercoming philosophers love wisdom? And the up-to-date psychologist says there is no psyche, and sets up laboratories to measure the reaction-time of nerve-currents. Post-Kantian philosophy, that which has had vigor and vogue, is summarized in the perverse pessimism of Schopenhauer, the insane individualism of Nietzsche, the scintillating impudence of Weininger, all sick and sickening men, all brilliant, pessimistic, untrue and untrustworthy; the logic of their labor, deny it as they will, ends in suicide. Back to Kant!

The cynic may interject that the advice,

Back to the Old Ways has been the cry of every age and of the dissatisfied of all times. Wherefore now repeat it again from the very heart of a civilization avid with desire, feverish with activity, and sated with unparalleled comforts and satisfactions? And yet it was not always a meaningless or inappropriate crying. Our most popular philosopher has taught eloquently and rightly that all movement is rhythmical, rushing advances alternating with back-currents, ebb following flow, crest and then trough of wave, eternally. These sallies and surges, some of them at least, must sometimes have been abnormal, even morbid. Experiments in Life they may be called, and we are well aware that many have been sorry failures. Going back and experimenting again may be the only method of going forward. Paleontology is a record of more failures than successes. Why not, then, Sociology?

The great modern multiform failure is easily explained. In the last one hundred years, for all modern nations, but especially for our country, has come what may

be called, *The Great Awakening*. The elements or causes of this awakening have been:

1. *Democracy*. The realization of the power and value of the individual, or, what amounts to the same thing, the belief in the value and the power, whether justified or not, whether simply morbid egotism or proper self-appreciation. It would be supererogation to point out the proofs, most manifest and sometimes appalling, of this swift extension of personal claim in all that governmental and social life we call civilized.

2. *Territorial Expansion*. Every nation having the power—and all have had or have claimed to have it—has acquired vast areas of land in every part of the globe.

3. *Wealth*. Not only have the rich become richer, fortunes which kings never had being now too common to attract attention, but millions now live in a state of luxury hitherto unknown.

4. *Material Invention and Discovery* have placed power and opportunities hitherto undreamed of at the disposal even of the poorest.

5. *Science and Knowledge* have been offered to all.

6. *The Printing Press* has almost forced the unwilling, if such there are, to supplement personal experience by that of all others.

7. *Relief from the Error and Wrong of Religion* has brought over-reaction and landed us in Atheism and Materialism, theoretical or practical.

The first fact to be held in fixed attention is that in all other countries except ours these seven factors of the Great Awakening have not come suddenly or synchronously, so that the universal arousing has been more slow and conservative than with us. Indeed, in only one country, France, did one or two of these calls to action come explosively and overpoweringly. But in the United States all seven have acted at once, with enormous and cumulative power.

The second fact to remember is that those called to exercise these amazingly vast freedoms, opportunities, and energies, had no training, experience, or expertness for the unwonted responsibilities. There could be but one result—national, social

and individual intoxication, and an extremism which, if it were not humorous as well as tragic, if it were not drunkenness instead of insanity, if we were not at bottom Teutonic, would have consumed the last man in chaotic revolution, and ended in a militarism madder than that of Napoleon. As it is we survive, so far at least, for the danger is not past, but at what an awful expense! We are still drunk with absurd individualism, with unutilizable expansion, with diabolic luxury, with the pandemonium of machinery, with undigested and untruthful knowledge, with yellow journalism and magazinism, and more than all, with practical and blatant materialism and determinism. Such appears the full and fitting explanation of our unfortunate, preposterous predicament, our national tragicomedy. This is the warrant for *Back to the Old Ways*.

Every one will return when and how he pleases, in his own individual fashion, because we are all over-individualized, and one must travel anywhere from the place where the present finds him, and in accord with the personal character, good or bad,

he has acquired. Among the many there are three chief routes, however, which finally lead to old-time certainties and satisfactions: that of induction, knowledge or true Science; that of kindness, duty or Ethics; and that of feeling, esthetics, or Art. Genuine knowledge, the knowing by observation and induction, can alone tell us what the world truly is, and what we ourselves are. We must ignore the deductive, the pseudo-science, and practically also the ultra, the overtechnical and theoretic varieties, which are of no use certainly to common folk and amateurs. We already have more of the undoubted true than we can bring into blessed practice for a generation or two.

Despite themselves all have some of the seeds of sympathy and duty in their hearts, so that by means of love we may be aroused and led back to a purer and sweeter family and social life. All need love and each needs to give it as much as to receive it. Since the world began it is the savior and the perpetuator of the race.

Beauty invites through the half-opened door of art. Whence the beautiful? It is

wholly miraculous, most illogical and incongruous in a world of matter, fate or law. It may not be defined except in metaphor and symbol—that it is, for instance, God's smile of joy at the perfection and success of His work. Art, then, is the answering smile of man, music the singing of the soft, low laughter, poetry the chant of those who cannot sing, sculpture the memory of a passing smile fixed in form, and painting the glimpse put in light and color. Ethics thus grows clear as the way we may help our Biologos, and our success, the fact of our helping, our happiness, His *I Thank You!*

With these as our companions on our return journey, there will come to all glimpses of the eternal wonder, thrills of recognition, which more and more bring an end of care, strain, or doubt, of scepticism and of wrong. Atonements are not sudden and dramatic, we know, but are made up day by day of a thousand little feelings, willings and doings:— some fair sweet afternoon, for instance, of sunshine and breeze, some deepening twilight sleeping into starlight silence; some landscape

witchery, or vision of unsuspected beauty; a sudden offering of gratitude, or a service needlessly done; the reach of a noble truth finally grasped; the perception of the cruelty of greed, the vanity and worthlessness of luxury; the forgiving of sin, and the forgetting of injury; the slipping of the bands of fate; and the coming of divine freedom; the pleasure and delight of the growing corn; the nestling of a child's hand in yours; the pathos of your dog's glance of dumb desire for humanization; the miracle of a flower, a strain of music, the meaning of a bird's song; the solemnity of great forest trees, the silence of attentive mountain heights; the brooding of the sky over his beloved earth, your sweetheart's kiss, and the whole wide world's wonder of love; the sudden sight of God's eyes looking steadily into yours—the revelation of the infinite—the Infinite Presence Himself, always there! Ah! such things come to them alone who seek the old ways, and wish to do their duty in the state of life unto which it shall please God to call them.

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